Walden University ScholarWorks

Walden Dissertations and Doctoral Studies

Walden Dissertations and Doctoral Studies Collection

2014

African American Race and Culture and Patients' Perceptions of Diabetes Health Education

Linda Marie Keenan
Walden University

Follow this and additional works at: https://scholarworks.waldenu.edu/dissertations

Part of the African American Studies Commons, Nursing Commons, and the Public Health Education and Promotion Commons

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Linda Keenan

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Linda Day, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Kirk Williams, Committee Member,
Public Policy and Administration Faculty

Dr. Cassandra Caldwell, University Reviewer,
Public Policy and Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2014

Abstract

African American Race and Culture and Patients' Perceptions of Diabetes Health Education

by

Linda Marie Keenan

MPA, Keller Graduate School of Management, 2009

BSN, Chamberlain College of Nursing, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

December 2014

Abstract

African Americans diagnosed with diabetes are less likely to self-manage diabetes-specific modifiable risk factors. As a result, utilization of healthcare services occurs at a greater rate than other racial groups, and thereby incurs higher than expected healthcare costs. This ethnographic study explored the elements of diabetes educational material African Americans in a large city in the southern part of the United States found most useful to facilitate self-management of their disease. Bandura's self-efficacy theory provided the theoretical framework. Research questions addressed the preferred educational content, layout of material, and methods for educational delivery and caregiver support. A purposive sample of 30 African Americans with diabetes who had engaged in diabetes education classes participated in this study. Data were collected through in-depth personal interviews, which were inductively coded and then categorized around emergent themes. A key finding of this study is that participants preferred group learning formats, but perceived educational material to be confusing and difficult to understand. They also expressed some preferences for the use of color, pictures, and presentation of graphical information that may provide the basis for a revision of educational materials. Interestingly, participants indicated a tendency to seek out church members rather than family for support. The positive social change implications of this study include recommendations to healthcare professionals to adopt educational curricula that reflect cultural nuances and needs of target populations in order to support better health outcomes for at-risk populations and cost efficiency improvements.

African American Race and Culture and Patients' Perceptions of Diabetes Health Education

by

Linda Marie Keenan

MPA, Keller Graduate School of Management, 2009

BSN, Chamberlain College of Nursing, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

December 2014

Dedication

First, I give thanks to God who has blessed me with determination, compassion, and a love of nursing. I dedicate this dissertation to my mother and father, who taught me that life is precious, family is everything, and hard work is rewarded. I give thanks also to my husband Dave, who has supported me in my academic journey; he has lovingly been my mainstay, kept me calm, and encouraged me in this endeavor. To little Grandma in your hat and green coat, I fondly remember your apple pie on Sundays; thank you, also, to my convent nuns who gave me many blessings throughout my young life and instilled in me the knowledge that with God at your side all things are possible. Thank you also to my children from whom I continue to learn, and to whom I hope I am an example of faith and hope for the future. This dissertation is dedicated to you all for your gifts of blessings and love throughout the years!

Acknowledgement

I wish to extend my utmost thanks to my Committee Chair, Dr. Linda Day, who provided so much support and encouragement; to my methodology expert, Dr. Kirk Williams; and to my URR committee member, Dr. Cassandra Caldwell, for your expertise. I wish to thank all of my academic and professional nursing colleagues who have shared this journey with me, and all the patients who selflessly shared their life experiences with me in the completion of this dissertation.

Table of Contents

Chapter 1: Introduction to the Study

Introduction

This study examined disease management amongst African Americans in a major urban center in the United States. African Americans comprised 13.6% (39 million) of the US population in 2011 and 30% of the population of Houston, Texas (Centers for Disease Control, 2013). Comprehending educational material enhances a patient's ability to be effective and self-manage disease; however, little prior research exists that is specific to this comprehension in the African American population (Hawthorne, Robles, Cannings-John, and Edwards, 2008). This lack of knowledge does not facilitate optimal health or the lowering of healthcare costs required by the Affordable Care Act (DPC, 2009). More than 25,000 of Houston's 1.2 million African Americans are diagnosed with diabetes, (United States Department of Commerce, 2012) and 18.7% of African Americans within the United States have diagnosed or undiagnosed diabetes (National Diabetes Education Program, 2011). It is crucial to identify optimal elements of educational material that will promote improvement in the African Americans' ability to effectively self-manage their diabetes.

There are several factors that make it important to study this population. Most African Americans have a genetic predisposition to diabetes (The Centers for Disease Control (CDC), n.d.). A 2013 study by the CDC noted that 14.2% of this population was in poor health. These statistics have important ramifications to American society as a whole, as the average cost of an individual with diabetes is two and a half times higher than that a non-diabetic individual. This constitutes a significant portion of the total health care cost in the United States, some $174 billion in 2007. Further research is crucial to determining what factors and elements African American individuals require to facilitate their effective management of diabetes (Kressin, Raymond, Manze, 2008).

Background

Patient-centered care is essential to facilitate self-management, as is adaptation of the self-management curriculum to be in alignment with the race and culture of the patient and caregivers (McDonald, Pezzin, Peng and Feldman, 2009). Gumbs (2012) detailed that African Americans’ higher risk of developing diabetes can be managed well by ameliorating risk factors. Kressin et al. (2008) discussed that racial disparities are documented specific to socioeconomic concerns as well as the physicians’ perception of race concordance (Snipes et al., 2011). Gumbs (2012) also claimed that African Americans, compared to other races, participate less in self-management education, and experience difficulty adhering to a treatment plan, evidenced by poor glucose control and higher glycosylated hemoglobin levels (Shacter, Shea, Akhabue, Sablani and Long, 2009). African American community health workers can aid in diabetes control by impacting the behavioral and socioeconomic factors that prevent or promote self-care (Spencer et al., 2011).

The literature is scant related to the cultural factors required for understanding health education, the ability to translate education into daily life, and healthcare insensitivity and individual bias (Gumbs, 2012; Madden et al., 2011; Stuard & Blair, 2011). Self-management information is intended by design to be sensitive and patient-specific (Spencer et al., 2011). However, Hawthorne et al. (2008) claimed that identifying ethnic disparities is essential in promoting sustained glucose control via adequate self-management comprehension. While improved self-efficacy in African Americans is related to enhance diabetes self-management, it is health literacy and cultural factors that are essential to achieve the understanding necessary to facilitate self-care (McCleary-Jones, 2011). Society's insensitivity towards the requirement for culturally competent healthcare negatively impacts informed decision-making (Kressin, Raymond, & Manze, 2008). Shavers et al. (2012) detailed that patient participation in decision-making can be hindered by even the most subtle cultural discrimination. Even though non-White races seek and utilize health care education more than White races, it is the communication from biased healthcare professionals and Black patients that is disparate (Rooks, Wiltshire, Elder, BeLue, &Gary, 2011; Stuard & Blair , 2011).

The ability to self-manage disease has a documented history of yielding positive results (Hibbard, Greene, & Tusler 2009). However, race and ethnicity were not stratified as part of these earlier studies, revealing that patient-centered care is not sensitive to cultural diversity (Andrulis, Siddiqi, Purtle, and Duchon 2010). African Americans experience challenges in expressing their physical concerns, and further investigation is required to investigate this phenomenon (McCleary-Jones, 2011). Additionally, Shacter et al. (2009) concluded that acquisition of knowledge without the ability to demonstrate the new task, does not improve health outcomes in African Americans with diabetes.

Patients will be successful when healthcare entities decrease cultural systems, which may include the tailoring of educational material in concert with the caregiver and support system (Madden et al., 2011).

These gaps in the literature established the need for this study. The literature reviewed, revealed a lack of understanding specific to race, ethnicity, and how African Americans' comprehension is different, inadequate, insensitive, biased, and potentially ineffective (Keenan, 2013). Literacy is more than the written word, and while education is language-sensitive, diabetes educational material is standardized and hence is not aligned with race or culture (Singleton & Krause, 2009). If the mandate is to lower healthcare expenditures, then I assert that healthcare professionals in the United States must develop racially and culturally appropriate educational material in order for patients to comprehend factors specific to maintaining their health. Research remains necessary to ascertain the preferred mechanism of self-management education delivery. Such includes the specific culturally relevant content that will facilitate and promote optimal awareness for African American Houstonians with diabetes. These findings can positively impact communities locally and nationally resulting in improvement in population health and the lowering of heath care costs overall.

Statement of the Problem

In 2010, Texas had a 9.7% diabetes mortality rate compared with Houston's rate of 15.3%, evidenced by Houston's 36.8 deaths per 100,000 persons and 31.9 hospitalizations per 10,000 African Americans (Texas Department of State Health

Services, 2013). An African American with diabetes in Texas can expect to stay in the hospital for six days (Texas Department of State Health Services, 2013) and with an average daily charge of $36,506, it is essential to promote patient’s self-management of diabetes and ultimately decrease health care costs (DPC, 2009). Comprehension of educational materials positively impacts a patient’s effective self-management of disease (Hawthorne et al., 2008). While educational materials are written at a fifth-grade literacy level and available in a patient’s language of choice (The Joint Commission, 2010) the current standardization of materials does not reflect cultural or racial nuances that will promote learning and comprehension by the African American Houstonians who suffer from diabetes. These problems can be seen in CDC (n.d) literature for African Americans with diabetes, which include information for families and caregivers to assist in the provision of physical and emotional support. While pictures of people in these materials are race concordant, the language, text, and curriculum content remain standardized. This disconnect is especially problematic because diabetes healthcare utilization in Houston continues to rise (Texas Department of State Health Services, 2013).

Food selection is the only culturally specific element of African American culture self-care that was found in the literature that alone is not sufficiently culturally sensitive to address all the elements of effective self-efficacy. Health literacy is essential for attention, retention, and motivation, to learn and implement a new behavior (Bandura, 1997). It was imperative that this study was conducted to explore what constitutes effective, culturally sensitive, diabetes educational material that promotes self-management, so as to address the diabetes-related needs of Houston’s diverse population and the growing number of uninsured and underserved African Americans.

Purpose of the Study

This qualitative study used an ethnographic approach to identify which elements of diabetes educational material African Americans found most useful to facilitate self-management of their diabetes, as suggested by Keenan (2013). While comprehension is essential to facilitate self-management of disease, the lack of research pertinent to ethnic nuances specific to disease education was of concern (Hawthorne, et al., 2008). Houston, Texas was a legitimate focus of study because more than 30% of Houston’s population is African American (United States Department of Commerce, 2012). Learning of cultural nuances specific to health care management is important for the population that is genetically predisposed to diabetes (Keenan, 2013; Kressin et al., 2008).

Research Questions

The primary research question asked what elements of diabetes educational material do African American adults with diabetes find most useful in self-managing their disease. Sub-questions were:

RQ1. Do African Americans, compared to other races and ethnicities, find diabetes easier to understand if the material is delivered and discussed at the time of the group session, or given after the group session as a take-home brochure?

RQ2. What do African Americans identify as barriers to understanding the standardized diabetes health education material utilized, as compared to other races or ethnicities?

RQ3. What type of material is more useful to the African American patient compared to other races and ethnicities in self-management of their diabetes: material containing pictures, graphs, tables, Likert scales, only text, or some other form of visual aid?

RQ4. Do African American patients with diabetes, compared to other races and ethnicities, find the use of color in educational materials to be more useful in understanding the material than black and white?

RQ5. What type of educational assistance material is used in the home by the African American patient (e.g., papers, brochures, videos, or audiotapes), and how does this compare to members of other races and ethnicities?

RQ6 – Do African American patients with diabetes share their health information with families, caregivers, and/or faith based community organizations, and how does this compare to other races and ethnicities?

Theoretical Framework

The qualitative paradigm of this study adopted an interpretive framework of social constructivism that focused on patients' experiences and views in order to expand upon self-efficacy theory (Bandura, 1997; Creswell, 2013). A patient's self-management via self-efficacy requires verbal and visual comprehension of material to optimize well-being health. Bandura's (1977) social learning theory details four aspects to learning:

attention, retention, motivation, and motor production. Social learning, and now self-efficacy theory details that observation of behaviors that are rewarded, are more likely to be replicated (Bandura, 1997). This study built upon Bandura's theory (1997) of self-efficacy to promote health and effective self-management of disease, which indicates that when patient comprehension is hindered, the attention and retention tenets of Bandura's theory (1997) are compromised.

A researcher's selected theory influences the study's paradigm, research questions, and approach (Creswell, 2013). The theory selected for my study was Bandura's (1997) process theory of self-efficacy. This theory was in alignment with my research questions on situational diabetes education, because it focuses on the written word, health literacy, and cultural relationships that promote and facilitate an individual's ability to adopt educational elements to skillfully manage their disease (Bandura, 1997). Social constructivism, as discussed by Creswell (2013), is a framework that permitted me to gather combinations of social, cultural and subjective views of the participants, and my inclusion of diverse multicultural patients (including African Americans) explored and ascertained the cultural elements and factors that prevented or enhanced a patient's self-management of diabetes. As a feature of ethnography, the use of Bandura's (1997) self-efficacy theory facilitated my ability to recognize patterns and themes pertinent to ethnicity, beliefs, and values that influenced the ability to self-manage a disease (Creswell, 2013). This theory provided a framework and lens to illustrate the necessity for exploring the culturally specific elements that African Americans individually experience (Creswell, 2013). This exploration was necessary in order to comprehend, adapt, and utilize patient education to allow patients to successfully self-manage their diabetes.

Nature of the Study

The study was inductive in nature, and as such expanded upon a small amount of knowledge via the exploration of African American patients' views, beliefs, and preferences regarding educational material (Creswell 2013). The qualitative design selected for this research facilitated the collection of individual patients' data, which unlike a quantitative design was expressed in words rather than numerical (Patton, 2002). My ethnographic approach was appropriate because the individual participants were culturally diverse and the focus of the study was on African Americans. This ethnographic approach aligned with my desire to explore and share the cultural beliefs of the African American race (Creswell, 2013). As part of the research, I aimed to establish patterns and themes specific to what African Americans with diabetes as compared to other races and ethnicities, found most useful in educational material developed to facilitate self-management.

The phenomenon of diabetes self-management within the African American culture was studied utilizing an ethnographic design. I utilized interviews as the strategy of inquiry to collect patient data to answer the research questions (Creswell, 2013). Individual interviews with culturally diverse patient participants were conducted over a period of several weeks, with the patients being the lowest units of analysis (Patton, 2002). Analysis in the ethnographic approach delivered participant data specific to diverse cultures and ethnic groups. This data, when compared in totality, detailed how African American culture can influence or create barriers to comprehending self-management educational material.

Research questions are more readily answered when the location and research environment is optimal for securing the participants' responses (Maxwell, 2013). To facilitate optimal participation, recruitment occurred in the patients' community health center of preference, and the interviews were conducted at the patients' location of choice (telephonically). Such familiarity with the location was important to assist in the development of a trustful relationship between the participants and the researcher (Creswell, 2013) during recruitment that resulted in active patient engagement in the actual interview process. The participants represented five cultures and were ethnically diverse. Additionally, all patients had an assigned primary care physician and were enrolled in a diabetes educational group (Keenan, 2013). The selection criteria required that each be male or female adults no younger than 18 years of age; there was no maximum age limit in the inclusion criteria. This age group was selected in anticipation that the participants would have varying life experiences that may have included the roles of adult caregiver, student, a spouse or partner, wage earner, unemployed worker, and who were legally able to make unilateral informed decisions. The clinics and specific conference rooms were readily available and accessible to me upon short notice.

However, all of the participants selected the option of a telephonic interview and such was accommodated. To ensure privacy for the telephonic interview, I utilized my office telephone and private line without the speaker option. It was important that I respect the participants and not be biased in the confidential collection and reporting of data, or be a barrier to the research by being intrusive or causing damage to the milieu (Creswell, 2013). In the data collection process, I obtained informed consent, which included the reason for the study, all potential risks, and specifically detailed how protected health information if received would remain confidential. I detailed that the choice to participate in the research was voluntary, and the participants could withdraw at any time without current or future healthcare being negatively or positively modified as a result of participation or withdrawal from the study.

As this research entailed the detailed comprehension of individual African Americans with diabetes, a small sample size utilizing interviews as the strategy of inquiry was pertinent (Miles & Huberman, 1994). As I desired to explore only African Americans with a diagnosis of diabetes, rather than incur a lower variation with a large random sample size, I utilized purposeful homogenous sampling resulting in a smaller sample size, but one that could result in a greater representation of the desired types of participants (Maxwell, 2013). Purposive sampling was the presence of African American patients within any existing diabetes education class of varying race and ethnicity from which I recruited participants. Homogeneity related to the criteria that necessitated each participant to have a diagnosis of diabetes. It is understood however, that no matter how representative a small sample size may be, such cannot be utilized to generalize to larger or other same race peer groups (Maxwell, 2013). In assessing the sample size, I evaluated my accessibility and availability of the participants. Strength to the sample participants was achieved by securing a homogenous sample (diagnosis of diabetes) to minimize variation amongst participating individuals (Patton, 2002). I commenced recruitment by explaining the study at the end of diabetes education classes which included an average census of 2 to 3 African Americans, amongst a culturally diverse patient population per class of 3 to 10 patients. The purposeful sample size was 18 individual African American participants of a culturally diverse population of 30 total participants. I commenced the research recruitment at three clinic locations and continued to attend a total of 10 clinics within the same health system until a minimum of 18 African American participants were recruited of a culturally diverse sum total of 30. I provided validity to my research utilizing triangulation and cross comparisons between the research sites and data collection processes, however such data was only applicable to the environment and participants studied (Maxwell, 2013).

Data collection was achieved using an interview protocol which is common when utilizing an ethnographic approach to a study (Creswell, 2013). Data collection was achieved via the use of a self-developed interview tool, which included two initial questions to facilitate participants' engagement and rapport, and a question asking for self-disclosed affiliation with a race or ethnicity. The interview tool comprised of ten open-ended interview questions, and a summation statement that sought additional participants' responses or discussion as desired. As the interviewer I collected information pertinent to the individual's African American's race and culture related to comprehension of diabetes self-management documents, as an outcome of comparison and exploration of responses from additional races, culture, and ethnic participants. Tape recordings of the interviews facilitated the accuracy in data analysis to include review of the information and transcription of the data post interviews (Patton, 2002). The accuracy of data collection required confidentiality in the capture, storage, and the reporting and ultimate presentation of the participant's responses. Such accuracy was facilitated by the multiple savings of all information retrieved to include memos, interview documents, researcher's notes, and tape recordings. The appropriate storage of all data was crucial to avoid the loss of invaluable material. Transcripts were numerically labeled in the date order of the interviews conducted and an alpha-numeric code was assigned to each participant. The race was abbreviated and included "W" for White, "AA" for African American or Black, "H" for Hispanic, or Latino, "A" for Asian, "S" for some other race, "AI" for American Indian or Alaskan Native, and "NH" for Native Hawaiian or Other Pacific Islander. Interview questions were open ended to facilitate the participants' dialogue and aided in the prevention of monosyllabic responses (Creswell, 2013). To facilitate responses of depth and detail, the questions were structured in the past tense and implicated a specific scenario or time to foster specific, rather than generalized responses (Maxwell, 2013).

Patton (2002) detailed that initial analysis of data includes the preparation for determining which methods will be used in the categorization of data and how subsequent coding will be performed. My strategies of analysis included the elements of data storage, organization of the data, development of patterns, a review of the field notes, transcripts, and audio recordings. The final steps included manual and software analysis, the identification of themes, and eventual preparation for data presentation. All data to include audio recordings were electronically stored in a computer and on a mobile drive. All interview documents, the portable drive, and researcher's notes, were locked in a safe with the combination known only to me. Each participant's interview sheet was labeled and the marginal notes and memos were evaluated during the initial manual identification of categories and themes (Miles & Huberman, 1994). This ethnographic approach facilitated the collection of plentiful data and I reviewed the marginal and field notes to identify key words, and categorized any patterns of repetition of phraseology (Creswell, 2013). I used ATLAS/ti© as the qualitative software package that permitted the downloading of text, pictures, audio files, and additionally, marginal, field notes and participants' responses were sorted into files and thereafter categorized as part of the data analysis (ATLAS/ti, 2013). ATLAS/ti© enabled my exploratory, rather than a confirmatory approach, to the data collection and analysis (Miles & Huberman, 1994). The "Hermeneutic Data Editor" within ATLASti© permitted the inclusion of data from multiple sources and possessed the capability to categorize and store the data in several formats according to my reporting needs (ATLAS/ti, 2010, p. 4).

Definitions

The key words and terms utilized during the development of this study and literature review that might be subject to individual interpretation are clarified below.

African American-A person with origins in any of the Black groups to include individuals' self-reporting as Negro, Black, and African American (CDC, 2013).

Self-management of disease-The capacity and ability to adopt health behaviors that are effective in positively promoting health and decreasing poor health behaviors

Self-efficacy-An individual's belief in the ability to take action resulting in required achievable events (Bandura, 1997).

Patient's self-efficacy-A patient's belief in the capacity and ability to perform behaviors that will ultimately influence, and change health behaviors (Sarkar, Fisher, and Schillinger, 2006).

Health literacy-The individual's ability to obtain and comprehend health information to promote appropriate healthcare decision making (CDC, 2009).

Culture-This is the shared and accepted beliefs and values within a group which influences decision- making (Singleton and Krause, 2009).

Racial disparity in healthcare-Such is a difference in the quality of care that is not influenced by access, specific interventions, or clinical necessity (American College of Physicians, 2010).

Assumptions

It is assumed that participants in the study were aware that their diagnosis of diabetes is not curable, and that care under the direction of a health care provider is necessary to promote health and manage the disease. The primary language of English was assumed as true, based on the participants' self-reporting, and absence of a request for a health care translator. At least a fifth-grade literacy level was assumed given a Houstonian's current average ability to read educational material at this level (Texas Center for the Advancement of Literacy and Learning, 1995-2012). The study discussed caregiver and family involvement as part of diabetes management, and it was assumed that the participants' positive verbal acknowledgment of access to a capable caregiver was deemed accurate. The assumptions were required in order to determine that each participant possessed a basic ability to read and speak English at a fifth-grade level, and understood that diabetes is a disease. Such baseline information was essential to commence the study. The ability to understand the written word and converse in English, provided the baseline for literacy of all participants. The assumed literacy level was pertinent to establishing a minimum understanding of the written word, hence not falsely influencing the participants' ability to comprehend self-management information. Lastly, as each participant self-identified with a race, or ethnic group, such responses were deemed to be true.

Scope and Delimitations

The scope of the study included a purposive, homogenous sampling of 30 culturally diverse Houstonians diagnosed with diabetes, of which18 were African American. All participants self-identified with a race or ethnicity to include being of African American, Black, American Indian, Asian, Hispanic, Latino, or White race. Specific aspects of diabetes self-management education were researched in terms of health literacy, communication, and culture, relevant to the elements of Bandura’s (1997) attention, retention, motivation, and motor production factors of self-efficacy. Adult participants were selected as informed consent was retrievable without involving a third party. Additionally, adults received educational material that was specific to the adult population, as the inclusion of pediatric or adolescent participants would have created barriers to comprehension of standardized material due to age. As the focus of the study was to explore how African American adults comprehend diabetes educational material, the inclusion of other races provided the foundation for exploring the differences between diverse cultures, and gave validity (non-disparate) to the data retrieved to answer the research questions. However, as the study’s focus was the African American population, such data pertinent to the culture and races of the other participants while valuable, cannot be transferred or generalized to such other specific races or cultures.

Delimitations of the study are related to the ethnic population selected, the adult age range of the participants, the English speaking population sampled, and the disease of diabetes. Findings are not generalizable to another ethnic disparate and/or minority population, pediatric patients, or adolescent's younger than18 years of age. The findings were limited to an English speaking, African American population who were diagnosed with diabetes and 18 years of age or older. Additionally, findings specific to preferred methods and types of educational materials were generalizable only to the participants, and limited to the subjective, yet rich responses to the interview questions. Transferability is limited to: male and female African Americans aged 18 years of age or older, presence of a diabetes diagnosis, and those who are the recipients of fifth-grade literacy level formal health education materials.

Limitations

Credibility in a qualitative design is dependent upon the strength of the participant-researcher relationship. The lack of a controlled environment is also of concern, as such is only evident in a quantitative or mixed methods paradigm (Creswell, 2013.) As I am privy to existing patient education material there was the potential for researcher bias. Bias in analysis of the data was considered, and secure data storage was necessary to ameliorate any loss of invaluable data which could have compromised accuracy of the results. While I desire to positively impact social change, I am aware that in order to mitigate validity concerns, the homogeneity of this study's purposive sampling may only be generalized to the African Americans in the population sampled.

Weaknesses include the validity and accuracy of the self-developed interview tool to solicit participants’ responses to answer the research questions (Creswell, 2013). Audio recordings could have been inaudible, and observations of voice and tone had the potential to be skewed by my verbal presence as the researcher during the interview process. The participants were known to each other; however the potential for peer influence on verbal behaviors and interaction (Patton, 2002) was mitigated. While discussion of the study occurred in a class forum, the participants were asked for their participation in private, and then at a later date interviewed individually. Weaknesses pertinent to the researcher were addressed by my full disclosure of any conflict of interests in the collection of data and the performance of the research. A “gatekeeper” introduced me to the diabetes education class members to assist in mitigating any researcher influenced behaviors being exhibited (Creswell, 2013, p. 154). As the design was exploratory, I ensured accuracy in the documentation of data, and also tape recorded the entire interview process for an additional review in completion of the transcripts. An interview protocol was utilized to conduct the interviews. While some interview questions were expanded upon to facilitate dialogue, the capture of rich and thick descriptions related to tone of voice, audible pauses, and hesitancy in dialogue, mitigated concerns specific to quality and integrity (Creswell, 2013). The tape recorder was tested to ensure such was in working order and an electronic backup was made of accompanying field notes, marginal notes, memos, and interview protocols, which were stored confidentially to mitigate loss.

To promote validity and quality of the study, I utilized the tools of proactive bias identification, reflexive triangulation, and member checking. Additionally, I ensured the reporting involved thick and rich descriptions, and the results incorporated negative and contrary data retrieved (Creswell, 2013). As I am aware of disease management techniques and disease processes, it is possible that I could have been biased to a certain method for delivering education in spite of the population being served (Keenan, 2013). As a nurse, past cultural experiences could have influenced my development of the interview questions. The interview protocol was reviewed by a doctoral prepared registered nurse, acting in the role of auditor. Similarly, and also external to my departments and leadership oversight, the retrieved data was reviewed by a doctoral prepared colleague experienced in qualitative research. In the role of peer debriefer, this clinical colleague reviewed my methodology, and transcript notes documented during the interview sessions. I documented and disclosed that I had the potential for researcher bias towards the participants, in the form of diabetes educational methodology and associated educational materials. In the initial transcript of the findings, I solicited participants' feedback specific to the data collected to check for accuracy of the interviews. Following transcription, I telephonically contacted the participants to perform member checking of the participants' responses to the questions posed as part of the interview protocol.

Mitigation of any personal biases was paramount to achieve integrity of the study, and the subsequent reporting of findings via the inductive analysis process. I attended the last few minutes of existing diabetes education classes comprised of potential participants of which I had no prior knowledge. All the participants received the same diabetes educational materials as part of their educational process. I explained to the class the scope of the study and the informed consent document. After the classes were complete proposed participants then self-selected to participate in the research during an individual and private conversation with me. For reliability, I attended and recruited from scheduled patient education classes at 10 sites thereby mitigating any influence of participants specific to location. Validity and reliability of the data retrieved was enhanced by spending prolonged time with the patients during the interview and recruitment processes (Creswell, 2013). To promote validity I ensured the data retrieved and transcribed was accurate via the inclusion of negative, positive, and contrary data which promoted quality in findings without bias. I triangulated data retrieved from all interviews to ensure themes identified were pertinent to all participants (Keenan, 2013). The software package ATLASti© was utilized to identify codes, themes, and patterns that were independent of researcher bias, and were cross checked by an additional researcher experienced in qualitative design to mitigate errors.

Significance of the Study

This study will contribute to existing knowledge specific to the adult African American culture, as such relates to the comprehension of diabetes educational material. Research findings additionally reveal new knowledge that will promote the development of culturally and racially appropriate patient education materials, regardless of the disease process (Keenan, 2013). Such will optimize a patient’s ability to self-manage diabetes, and also facilitate the development of health information to promote effective, personal, and community health, for the African American race and culture (Keenan, 2013). Such knowledge sharing has the potential to positively influence individual and community relationships, and ultimately mitigate disparities in health care delivery. This study’s findings will foster further research to benefit our diverse communities with effective health education. Development and use of appropriate and effective health information will potentially decrease healthcare costs as a result of improved self-management of diabetes. Inclusion of this study’s culturally relevant findings has the potential to influence public health policy in the requirement for development of effective, adult, disease related information.

Summary

Chapter 1 provided an introduction and purpose for the research topic of how adult African Americans, comprehend diabetes educational material which is designed to optimize effective self-management of disease. This study was necessary due to the gaps identified in the literature that related specifically to African American cultural comprehension of written health information, and the use of any audio or audio visual material or methodology, that is useful in self-education of diabetes as a disease. Bandura’s (1997) self-efficacy theory provided the framework for the study exploring the culture within the tenets of attention, retention, motivation, and motor production (Bandura, 1997). Chapter 1 detailed the limitations, delimitations, scope of the study, and clarified aspects of transferability, generalization, and mechanisms for minimizing bias and promoting validity and credibility. The qualitative methodology is discussed with an ethnographic approach explaining the interview strategy of inquiry as supported by the research literature. Significance of the study and potential for local, state, national, and global social change is discussed. The literature selected for review and inclusion is focused in the areas of health literacy, culture, self-management, and is discussed in accordance with Bandura's (1997) tenets of self-efficacy.

African American patients were studied in accordance with Bandura's (1997) tenets of learning, specifically attention, retention, motivation, and motor production. Chapter 2 details how each tenet of self-efficacy pertains to the African American adult who is receiving diabetes education. The element of attention is discussed relevant to the literature supporting the need for individualized, non-standardized, education (Bandura, 1997). Retention is discussed in concert with health literacy, in order to study what material is most effective for retention of diabetes self-management techniques. Motivation to self-manage disease is explored in chapter 2 relevant to the African American culture pertinent to developing caregiver, and family involvement with diabetes educational material. Motor production is discussed relative to the patients' voiced preferences of educational material, which promotes self-management of their disease.

Chapter 2: Literature Review

Introduction

In 2011, African Americans comprised 13.6% (39 million) of the United States population (Centers for Disease Control, [CDC] (2013). My study focuses on the African American population, and the cultural nuances in diabetes educational material that promote or hinder self-management of the disease. While healthcare is sought more frequently by the African American Houstonian with diabetes than other races; Houston's mortality rate for diabetes among the African American population was 15.3% in 2010 compared to 9.7% statewide (DPC, 2009). The genetic predisposition to this disease for 1.2 million African American Houstonians is evident by the 25,000 African American Houstonians already diagnosed with diabetes (Texas Department of State Health Services, 2013; United States Department of Commerce, 2012). The average charge per day for African Americans hospitalized with diabetes was $36, 506 (DPC, 2009). It is essential that African Americans are able to self-manage and diminish the harmful modifiable risk factors of diabetes (CDC, n.d). The purpose of this research was to explore which elements of diabetes educational materials are most useful to African Americans in self-management of their disease.

Relevance of the Problem

Comprehension is crucial to optimize an individual's ability to manage their disease (Kressin, Raymond, & Manze, 2008). There is a lack of research pertinent to ethnic minorities that promotes disease prevention; this is not aligned with the Patient and

Affordable Care Act, which states healthcare is to be patient-centric, culturally sensitive, and focused on improving health (Hawthorne, et al., 2008; DPC, 2009). Learning of cultural nuances specific to health care management is important to the population that is genetically predisposed to diabetes (CDC, n.d.; Kressin et al., 2008).

Race-concordant graphics and pictures accompanying culturally specific food selection are the only African American elements of self-care that were found in the literature search. While the CDC (2013) provides educational material with race concordant pictures, the language, text, and curriculum remain standardized. This content alone does not facilitate and address all the elements required for effective self-efficacy as detailed by Bandura (1997). Health literacy is essential for attention, retention, and motivation, to learn and implement a new behavior (Bandura, 1997). The African American culture, similar to other cultures, has jargon and colloquialisms that accurately speak to the culture of the person rather than society as a whole (Hawthorne, et al., 2008). Houston’s growing number of uninsured and underserved African Americans makes it imperative to explore what constitutes culturally sensitive diabetes educational material and effectively promotes self-management.

This chapter reviews literature pertinent to African Americans’ self-management of diabetes and explores the elements of health literacy, self-efficacy, and culture, relative to the promotion of optimal health outcomes. Self-efficacy theory is explained and provides the theoretical framework to discuss how Bandura’s (1997) self-efficacy tenets of attention, retention, motivation, and production, are reflected in an African American’s ability to self-manage their disease. Plentiful research details the target population's negative outcomes as a result of deficits in comprehending educational material. While this literature is consistent in detailing the necessity for comprehension of health education, a research gap exists concerning specific educational elements that promote optimal self-management of diabetes for African American Houstonians. The chapter concludes with a summary of past pertinent research that has informed and directed the pursuit, development, and necessity to conduct this current research.

I procured literature via the Walden University databases for Policy and Administration, Political Science Complete, ProQuest Central, Human Services, and Nursing. The search engines utilized were Google Scholar, MSN, and Yahoo. Personal affiliations enabled access to the professional databases of The Centers for Disease Control and Prevention, Robert Wood Johnson Foundation, and the American Diabetes Association. Search terms included: *African American, health literacy, self-management, diabetes, disparities,* and *culture.*

I used the Political Science Complete database to conduct searches using the Sage Full-text collection of open access journals. The date range entered for retrieval of the literature was from January 2010 until June 2013 in order to assure content would be current. The discrete field requesting all articles displayed were to be peer reviewed was selected. *African American* as the primary term and/or *health literacy* as the secondary term were entered into the search fields which yielded 213 articles discussing African American culture, racial disparities, and African American educational literacy.

The Nursing category within Walden University's library portal gave access to a selection of nursing and allied health databases. Searches were simultaneously conducted in CINAHL and Medline. The primary term of *African American* with a Boolean Operator of *diabetes* yielded 2,958 research articles. The date range entered into the CINAHL/Medline databases was from January 2008 to June 2013 to retrieve literature current within the last five years, and peer-reviewed articles written in English were selected. Another search using the primary term of *African American* and a Boolean Operator of *self-management* narrowed the search with the retrieval of 337 research articles. The addition of *diabetes* as a third search term yielded 185 articles and a mere 15 articles were retrieved when the term *diabetes* was exchanged for *health literacy*.

SocINDEX was the database accessed within the category of Human Services via the Walden University library portal. With a key term of *African American* and a Boolean Operator of *health literacy*, 14 peer-reviewed articles in English that dominantly highlighted health literacy in African American women were retrieved. The multidisciplinary ProQuest Central database yielded 25 articles using the search term of *African American* and the Boolean Operators of *self-management* and *diabetes* when limited to peer reviewed journals and publications after 2008. The professional databases of Robert Wood Johnson Foundation, American Diabetes Association and Centers for Disease Control and Prevention yielded numerous studies, demographic data, and research and educational material pertinent to African Americans and associated diabetes self-management, health literacy, and health disparities. Parameters for the literature search included only articles that were peer-reviewed and published after 2007. With healthcare knowledge being frequently updated, I utilized articles published only after 2007 in order to optimize currency of the literature search.

Theoretical Foundation

Bandura's (1997) self-efficacy theory provided the theoretical foundation for this dissertation. The theory of self-efficacy asserts that human beings have influence over their behaviors and the belief in this personal power and ability determines how effective an individual's action will be (Bandura, 1997). Self-efficacy theory is commonly utilized in healthcare to understand how patients and caregivers can be empowered to change personal behaviors that will promote health, and impact the aspect of coping on the physiological aspects of the body (Bandura, 1997).The ability to change behaviors and modify risk factors is aligned with this study's topic of effective diabetes self-management of diabetes.

Self-efficacy theory originated as an expansion of Bandura's (1977) social learning and social cognitive theories. Bandura determined that self-efficacy is a crucial element of social cognitive theory (Bandura, 1997). This theory considers attention, retention, motivation, and production to be the essential processes of observational learning (Bandura, 1977). However, observation or verbal instruction does not ensure that an individual's behaviors will change. Self-management of diabetes requires education through both demonstration and the written word, which aligns well with self-efficacy theory in exploring what specifically African Americans find the most useful in their diabetes educational material (American Association of Diabetes Educators, 2011). As personal and cultural beliefs impact an individual's perceived self-efficacy, the tenets of self-efficacy theory can be adopted to examine how the cultural beliefs of African Americans can influence the comprehension of diabetes educational material.

Self-efficacy aligns well with the self-management behaviors that when learned, will promote health via education to modify risk factors. What do African Americans perceive is culturally lacking in standardized diabetes education, is not useful, or reduces comprehension, and limits attainment of the self-management skills required? Self-efficacy theory has been widely used as a theoretical foundation pertinent to behavior changes and the ability for patients to perceive their effectiveness in management of disease. Bandura (1997) assigns a complete chapter to the discussion and outcomes of self-efficacy in the management of chronic disease.

Kasicki's (2011) qualitative study applied self-efficacy theory to find that initiation and sustenance of effective self-management behaviors were improved when patients positively perceived their ability to manage their chronic obstructive pulmonary disease. This theory was tested by Sarkar, Fisher, & Schillinger's (2006) research that was specific to diabetes self-management across race and level of health literacy. Findings revealed a positive association between self-efficacy and diabetes self-management among the 408 participants. The tenets of Bandura's (1997) self-efficacy theory were the focus of Mishali, Omer, & Heymann's (2011) quantitative study of 119 patients with diabetes. The development and administration of a self-efficacy measurement tool was utilized to determine if low self-efficacy was linked to a reduction in treatment adherence (Mishali, Omer, & Heymann, 2011). Similarly, Bandura's (1997) self-efficacy theory was tested in Annesi, Unruh, & Whitaker's (2007) quantitative study of 76 sedentary and obese women. Findings revealed a positive correlation between a positive concept of self and improved attendance and sustenance of exercise adherence. The ultimate support of self-efficacy theory and the necessity for this proposed study is the recommendation by Hendricks, et al. (2013) that ethically, self-efficacy should become a mandate in the development of health promotion and research. Such is particularly relevant in the African American population that is less responsive to standardized and traditional health education relative to changing unhealthy behaviors (Hendricks, et al., 2013).

While self- efficacy and internal beliefs can facilitate external actions (Bandura, 1997) it is unclear from the literature why African Americans are less able than Caucasians to self-manage disease (Hendricks, et al., 2013). This study utilized the tenets of self-efficacy theory to explore what elements of standardized educational material are effective in the capture of the following:

- an African American's attention relative to education;
- the specific elements necessary for cognitive retention, and promotion of education retention;
- the skills necessary for adoption of healthy behaviors, and motivation to self-manage disease effectively.

The research questions in this study were developed to explore and establish which elements of patient educational material are the most useful in facilitating self-management of diabetes. Albeit standardized education and a minimum of fifth-grade literacy level (Texas Department of State Health Services, 2013), the African American population with diabetes are less able to self-manage their disease (Hendricks et al., 2013). In Houston, this inability to self-manage diabetes, results in greater hospital admission rates for the African American than Caucasian population. Patients with diabetes learn about their disease and self-management techniques via observation, the written word, and then practice modeling the behaviors that aid in self-management. Unless the individual believes and perceives they are able to learn, motivation to learn and sustenance of such learning will not be effective (Bandura, 1997). The belief in one’s own ability to achieve can create action, but only when attention is gained and understanding occurs, can behaviors be changed to achieve the motivation to sustain the learning process (Bandura, 1997).

Health Literacy

Definition

Health literacy is defined as the ability to understand medical information sufficient enough to make healthcare decisions. The Centers for Disease Control (2009) believes that provider communication and patient comprehension requires further research. In the United States, the cost of inadequate health literacy is as high as 73 billion dollars (Badarudeen, & Sabharwal, 2010). Health literacy alone does not improve self-management of diabetes, but necessitates sensitivity towards a patient's or population's culture (Shaw, Huebner, Armin, Orzech, & Vivian, 2009). While nurses involved in patient education are aware of health literacy concerns, there was a lack of literature specific to determining and creating the linkages necessary between culture and language to facilitate health literacy (Shaw et al., 2009). Cultural beliefs are asserted to be a determining factor in the patients' comprehension (attention and retention) and effective health activities supporting positive self-management techniques (motivation and production) (Shaw et al., 2009).

Patients' culture influences their ability to comprehend health education material. With African Americans having lower health literacy than Whites (Hall, John-Turbes, & Williams, 2010) it is imperative to establish a preferred method of effective communication. Mistrust in providers and low health literacy are barriers to the of African Americans' access to health information, and retaining such to foster effective healthy behaviors (Hall et al., 2010). A meta-analysis of African Americans' use of Black Radio, revealed that 90% of African American consumers actively listened to the radio at least weekly (Hall et al., 2010). Black Radio communication could improve attention to information that facilitates the recruitment to research studies, and mitigation of concerns relative to health literacy (Hall et al., 2010). I assert such a delivery method could be useful in seeking the African American's input into the development of material to be delivered via documents, telephone, and electronic media.

Stiles' (2011) meta-analysis concluded that nurses must be familiar with the concept of health literacy in order to support patients' effective self-management of disease. A review of articles from 2004 to 2011 revealed common themes including: 1) necessity for improving communication between nurses and patients, 2) providers and patients, and 3) acknowledgement of the need to understand that health literacy facilitates patient empowerment in self-management of disease (Stiles, 2011). A nurse's understanding of health literacy can promote individualized patient education (Stiles, 2011) and aid in patient's motivation, which is a tenet of Bandura's (1997) self-efficacy theory. While Stiles' (2011) review was conducted in the United Kingdom with health system resources that are different than the United States, the premise that a nurse is to tailor patient education to the patient's culture and health literacy level remains relevant. How to tailor health (diabetes) education specifically to African Americans was explored as part of my study.

Weekes' (2012) systematic review of 143 peer-reviewed articles concluded that there is a lack of literature pertinent to African Americans and health literacy. This scarcity of literature was concerning as low health literacy negatively impacts a patient's ability to make healthcare decisions (Weekes, 2012) and ultimately hinders application of self-efficacy skills (Sarkar et al., 2006). The systematic review yielded five themes that included: comprehension of disease, provider communication, patient's perception of health, improvement in patient comprehension, and cognition (Weekes, 2012). Limiting the literature search to include only validated and tested health literacy tools may have resulted in the exclusion of commendable relevant articles (Weekes, 2012). However, Weekes (2012) was able to establish that health literacy impacts the African American patient’s comprehension of educational material, but additional research is warranted to focus on low health literacy in the African American population. As a link between literacy and health literacy has been validated such information is especially relevant for the average African American Houstonian who reads at a fifth-grade level and who were included in my study (Friedman et al., 2009; Texas Center for Advancement of Literacy and Learning, 1995-2012).

Culture

It was the repeated emergency department visits by African Americans that prompted Davis, Pope, Mason, Magwood, & Jenkins (2011) to conduct their mixed methods research. Of the 20 African Americans studied, a positive association between patient perception and cultural perspectives upon self-efficacy was established. Results indicated that 14 of the 20 participants interviewed were low in self-agency as a result of the inability to communicate their needs due to: 1) psychosocial concerns, 2) situational stress, and anxiety regarding the disease (diabetes) process, 3) decreased attention, and 4) inability to retain and learn self-management techniques (Davis, Pope, Mason & Magwood, 2011). The theoretical foundation of positioning theory positively validated that patients identify and position themselves dependent upon cognition and their personal ownership in discussion of their disease (Davis et al., 2011). Strengths of the study included the use of a race concordant researcher, and a secondary analysis of the six participants who were high in self-agency, revealing the themes of self-awareness and ability to control their diabetes. Limitations related to the small yet purposive sample size, the vast range of participant ages (30-88), and varying time experiencing diabetes ranging from 3 weeks to 36 years.

Nunez, Yarandi, & Nunez-Smith (2011) also ascertained that patients of African heritage perceived culture to be a barrier to positively influencing self-management of diabetes. The mixed methods study involved a purposive sample of 53 adults of African descent from the Virgin Islands. Findings supported Davis et al., (2011) study that during interviews and surveys the participants communicated an affinity for the use of traditional alternative therapies to that of Western medicine (Nunez, Yarandi, & Nunez-Smith, 2011). This finding was important to my study in order to adequately prepare interview questions that facilitated discussion regarding culture and familial support, versus solely the medical management of diabetes. The dependent variable of glycemic control was used as the outcome variable to determine how culture influences the independent variable of self-management ability (Nunez et al., 2011). This study was limited to the patients recruited being established in a provider-client relationship, albeit located in an under-resourced location. Recognition, that an increase in knowledge resulted in improved healthy behaviors, suggested that diabetic educators must tailor patient education to the patient or population’s culture. What specifically comprises culturally sensitive education however requires further research (Nunez et al., 2011). Similarly, the Peek et al. (2012) observational cohort study revealed that further research is necessary to determine how best to tailor diabetes education and provider instruction. Such findings support my study in the search for specific patient educational nuances that will improve positive diabetes outcomes among the low income African American population.

Sociocultural factors were deemed significant in researching future time orientation (FTO), present time orientation (PTO), and religiosity, during a survey of 110 older African Americans with diabetes (Rovner, Casten, & Harris, 2013). This orientation to living in the present, allows some African Americans to exert either a heredity Fait Accompli beyond prevention, or a perceived costly expense to obtain special foods and supplies to manage their disease (Gavin & Wright, 2007). Case studies identified the necessity for providers to understand how their patients perceive diabetes, rather than the usual clinical management of laboratory values (Gavin & Wright, 2007). Specifics of understanding are minimally explored in the literature (Gavin & Wright, 2007). However, active listening and acting upon the patient's beliefs relative to self-management are elements in my study that further explored how to tailor educational material to the African American culture.

Disparities

Discrimination is at the core of racial disparities in healthcare as a result of the inability or desire to understand the patient's perceptions of disease (Gavin & Wright, 2007). Providers must become more astute in cultural competency and address the linguistic need of the patient (American College of Physicians, 2010). Reasons for disparities among the African American population are aligned with socioeconomic factors, poor access to care, lower level of health literacy, and associated increased mortality and genetic predisposition to diabetes (American College of Physicians, 2010; Gavin & Wright, 2007). Specific research to identify the cultural concepts of the African American's approach to self–management of diabetes is crucial, to facilitate the development of educational tools, and to decrease disparities relative to healthcare education (Gavin & Wright, 2007). The American College of Physicians (2010) is supportive of the need to train providers and nurses in cultural competency. Such education will foster a trustful provider–patient relationship that will optimize understanding of disease, and promote patient empowerment to participate in decision making (American College of Physicians, 2010; Nunez et al., 2011).

The element of trust was successfully utilized in the delivery of self-management education in North Carolina African American communities. Church leaders were trained in diabetes education and the trustful delivery of communication resulted in improved self-management behaviors among the African American population studied (Samuel-Hodge et al., 2006). Self-efficacy theory was employed in the research framework that established an increase in self-efficacy of implementation of healthy behaviors, following the African American church led diabetes education program (Samuel-Hodge et al., 2006). The trustful communication optimized the attention and retention tenets of self-efficacy theory in the ability and desire to learn (motivate) and increase healthy behaviors (production) (Bandura, 1997).

This literature review identified that trust in a provider-patient relationship is a critical factor for African American self-care efficacy. Surveys of clinicians and patients of White and Black race revealed that clinician bias towards ethnicity was a factor in African Americans' perception of trust and patient centered care (Blair et al., 2013). The Blair et al. (2013) study supports the Institute of Medicine's assertion that clinician bias can contribute to health disparities and the inability to comprehend culturally sensitive conversation and health information. Interestingly, White physicians revealed during focus groups that patient race was less important than medical data in treatment decision-making (Snipes et al., 2011). In contrast, Black physicians discussed that while race was of primary importance in determining health, psychosocial factors were also necessary for patient decision-making. A limitation to the study may have been the Black physicians' experience with disparities which elicited more insight into such; however findings revealed that White clinicians have the potential for fostering unwelcome disparities when treating Black/African American patients (Snipes et al., 2011). In contrast the Sequist et al. (2010) randomized controlled trial of 2,699 Black patients with diabetes did not have glycemic control improvement (48 % pre intervention and 45% post) albeit provider cultural training. While 11% of the 124 primary care physicians did not participate in provider training, this limitation was believed to be insignificant in accounting for the lack of positive outcomes in the Black population, with further research pertinent to race and education being discussed as essential (Sequist et al., 2010).

Studies exploring reasons for healthcare disparities are of particular importance to the Alliance to Reduce Disparities in Diabetes. This organization strives to reduce disparities in the care delivery and treatment of diabetes in underserved communities. In alignment with the Alliance to Reduce Disparities in Diabetes (2012), my study's findings will increase the knowledge specific to the gaps identified in diabetes self-management, pertinent to minority and underserved patients. Such new knowledge is essential to influence public policy and public health changes in the delivery of culturally sensitive, and health literacy appropriate healthcare (Alliance to Reduce Disparities in Diabetes, 2012).

A quantitative retrospective analysis of 10, 699 African American patients with diabetes was conducted to study how race impacted process and outcomes with the aim of further understanding disparities between Caucasians and African Americans (Bulger, Shubrook, & Snow, 2012). Of the 10, 699 surveyed, 3123 African Americans scored similar to Caucasians in terms of accessing healthcare, but scored significantly lower (P=.02) than Caucasians in the actual outcome measurement of glucose control (Bulger et al., 2012). While limitations of the study may have included varying levels of illness severity, there were distinct disparities between process and clinical outcomes in the African American population. Such findings warrant further research regarding what the disparities are in diabetes care for African Americans (Bulger et al., 2012).

Glucose control was the focus of Shacter et al., (2009) qualitative comparison study amongst 33 African Americans and 21 White veterans with well and poorly controlled diabetes. Similar themes (as in previously discussed studies) were voiced as barriers and included: inability to sustain self-management techniques, lack of access to health care, psychosocial barriers (family life, stress, and depression), and lack of self-care skills (Shacter et al., 2009).

Trust

A Robert Woodrow Johnson Foundation (RWJF) (2012) review of Peek's (2012) research elaborated upon cultural sensitivity and aligned such with trust and communication between a provider and patient. African American patients were mistrustful of a provider's care, based on cultural beliefs of bias and non-consented medical trials (Tuskegee) and potential experimentation (Peek et al., 2012). Distrust with physicians was also voiced by African American males given the racial history of the Tuskegee incident, where for a promise of free treatment and healthcare, over 100 African American Airmen died possibly as a result of exposure and resultant untreated syphilis (Grace, 2011). Trust must be earned, and an African American's silence in the provider-patient relationship is one of self-protection, and limits discussion specific to personal life and beliefs that are the essence of cultural competence in the development of educational material (Grace, 2011). Additionally Peek et al. (2012) realized that physicians were less likely to recruit African Americans to diabetes educational programs, therefore reinforcing the patient's question of clinical competence and mistrust on behalf of the patients.

Sex

Cultural competency in the promotion of patient disease self-management includes an awareness of the specific learning and belief differences between African American males and females. Every 24 hours, 3600 people are diagnosed with diabetes in the United States (Grace, 2011). African American males have a life expectancy of 66.1 years in comparison to the national average of 73.6 years (Treadwell et al., 2010). A community education approach to diabetes and its modifiable risk factors yielded positive results; in concordance with the belief that Africa American males' involvement in their community, promoted provider-relationship trust and facilitated the awareness of psychosocial barriers (Treadwell et al., 2010). Focus groups of a non-probability sample of 42 African American males, established a perceived lack of community support, a distrust of the medical community, and an inability to understand diabetes and obesity (Treadwell et al., 2010).Unfortunately while laboratory values and communal exercise resulted in positive values, Treadwell et al., (2010) did not elaborate upon the Centers for Disease Control amended standardized educational curriculum utilized. Support for the African American male from same-sex community health workers may aid self-management for those males who are not able to incorporate exercise or socialize into their education regime.

Rahim-Williams (2011) mixed methods research explored what health beliefs and self-management behaviors are evident amongst African American women with diabetes. Although 65 % of the participants voiced ease in management of disease, such data does not align with the 11.8 % (and rising) of 20-55 year old African American women in the United States who are diagnosed with diabetes (Rahim-Williams, 2011). Healthy food choices are part of diabetes self-management, and with a culturally rooted belief that African American women are beautiful when overweight, it is essential to provide educational material that addresses how to manage weight in spite of a desire to the contrary (Rahim-Williams, 2011). Of the interview and questionnaire responses from 80% of the participants, 75% revealed similarity in behaviors of exercise, medication adherence, weight loss, and monitoring of blood glucose (Rahim-Williams, 2011). Further research is necessary due to the limitation of this study being a small sample size that lacks generalization to a larger population. Additionally, effective self-management was not measured via reconciling blood glucose values in conjunction with the adoption of healthy behaviors (Rahim-Williams, 2011).

African American women with diabetes voiced different challenges than males relative to experiences with dietary self-care (Murrock, Taylor, & Marino, 2013). Of the 24 African American female focus groups' participants, four themes were identified: 1) continued difficulty to adhere to dietary change as part of everyday life constraints, 2) requirement for guidance, 3) desire for continued support, and 4) gaps or confusing information (Murrock et al; 2013). The phenomenological approach to this study utilized a certified diabetes race concordant educator to facilitate a guided discussion. A consensus of patients voiced a lack of useful diabetes educational material, and real life cultural adaptation to promote optimal self-care (Murrock et al., 2013). While the themes support the need for further research in development of useful diabetes education, the small sample size prohibits generalization to a larger group. Additionally, group responses may have been less than forthright in order for the participants to become socially accepted by their peers (Murrock et al., 2013). This limitation however, is pertinent to the potential lack of income and decreased healthcare access directly experienced by greater than 35.9% of African American Houstonians without health insurance (School of Public Health, Health Indicators Committee, 2009).

A positive link was identified in African American women with diabetes, between self-management instruction, daily life barriers, adherence to necessary behavior changes, and evidence of self-care behaviors (Gumbs, 2012; Murrick et al;.2013). There is a need to identify and include such cultural elements in diabetes education, to facilitate African American women’s self-management of their disease. Of 2,837 participants, disparities were identified that included less use of healthcare services and poor glycemic control, which can be potentially attributable to the lack of self-care behaviors (Gumbs, 2012).

Faith

Realizing that faith and spirituality impact health, the CDC in collaboration with the Southern Center for Communication Health and Poverty (SCCHP) conducted studies specific to communication in the African American communities. Albeit the communication developed was to facilitate awareness of an influenza pandemic, the methodology of utilizing church leaders as tools of communication is applicable to the African American community as a whole. The CDC (2010) established that health communication is more effective when faith based leaders are the instruments of delivery within the community. This finding is in alignment with the African American's lack of trust in the provider impedes the understanding and practice of healthy behaviors (Grace, 2011).

Spirituality and health are interrelated (Grace, 2011). Awareness of the diabetes diagnosis however, can be inhibited as a result of believing that disease is experienced by those with a lack of spiritual belief (Grace, 2011). The Community influences the African American individual and can be a positive source of knowledge, if culturally appropriate educational programs are administered in churches and faith based organizations is (Grace, 2011). Older African Americans that achieved self- management behavior of blood glucose monitoring, exercise, and healthy food awareness, scored higher in religiosity (Rovner et al., 2013). Such finding validates that the presence of faith and spirituality positively influences the older African American in the acceptance and participation in self-management behaviors.

Self-efficacy

Self-efficacy is at the core of self-management ability which promotes capacity for patients' problem solving (Cardozo, Steinberg, Cardozo, Veeranna, Bibban, & Lepczyk, 2011). Self-efficacy is discussed in terms of disease management and patient effective coping skills. However, Steinhardt, Mamerow, Brown, & Jolly (2009) discussed a lack of research pertinent to improving patient empowerment and self-management skills of African Americans with diabetes. Steinhardt et al., (2009) conducted a quantitative pre-test, post-test study on a convenience sample of 16 African American men and women, resulting in 12 completing the diabetes coaching program. The pilot study was to establish if provision of a diabetes coaching intervention would be culturally acceptable and useful in the African American's self-management of diabetes (Steinhardt et al., 2009). Variables included: diabetes empowerment, self-management, and their impact on blood glucose and glycosylated hemoglobin, following participation in educational sessions of eight weeks duration. Self- management, glycosylated hemoglobin, and empowerment were among the significant *t* tests (Steinhardt et al., 2009). However, results for the fasting blood glucose were insignificant (Steinhardt et al., 2009). Focus groups were held eight months after completion of the pilot education revealing positive patient feedback. Interestingly, it is fasting blood glucose that responds to self-management behaviors in the short term, so further research is warranted to achieve long term effects on glycosylated hemoglobin, and sustenance of self-management coping skills.

Peters and Templin (2010) utilized the theory of planned behavior to predict and measure the beliefs and self-efficacy of 306 African Americans with and without a diagnosis of high blood pressure or chronic illness. High blood pressure similar to diabetes, also responds well to self-management of modifiable risk factors. Peters and Templin's (2010) quantitative study utilized self- administered questionnaires to test for a good fit (Comparative Fit Index, CFI=.90) for the theory of planned behavior to predict a patient's ability to participate in self-care. Self-care theory was integrated into the theory of planned behavior, facilitating the study and prediction of self-care behaviors that were aligned with self-care, and the behaviors' associated outcomes (Peters & Templin, 2010). Limitations of the study related to the unusual utilization of the theory of planned behavior as an achievement and such requires more research (Peters & Templin, 2010). The involvement of self-care theory however, provided insight into a clinician's incorrect assumption that standardized material is understood by a variety of patients (Peters & Templin, 2010). It is this assumption elicited from the dual model of these theories that warrants further study into how clinicians must assess a patient's beliefs, culture, and attitudes, in order to adapt patient education to effectively facilitate self- care and resultant positive health outcomes (Peters & Templin, 2010).

It is this understanding of African American beliefs and attitudes that Wexler, Elton, Pleister, & Feldman, (2009) studied, utilizing focus groups comprised of 26 patients with high blood pressure. Management of blood pressure is a key factor in controlling the onset or complication of diabetes, so this qualitative study to develop culturally sensitive self-care educational material was of great interest. Findings from the race concordant led focus groups included: 1) the evolving theme of mistrust of physicians, 2) an acceptance that genetic disease will occur with or without self-care, and 3) culturally sensitive materials are improved when the same race community is involved (Wexler, Elton, Pleister & Feldman, 2009). One limitation of the study related to the minimum high school graduation level of the patients sampled. Such limitation imposes special consideration for the African American Houstonian whose average reading level is at the fifth-grade (Texas Center for the Advancement of Literacy and Learning, 1995-2012). My study explored the usefulness of current diabetes educational material which is standardized at the fifth-grade level, yet lacks the content necessary for the African American Houstonian to optimize self-management of their diabetes.

Summary and Themes

Many research studies and subsequent literature reviews pertinent to culture, self-efficacy, and health literacy in the African American population, were of a qualitative or mixed methods approach. It is common for the social sciences and nursing to utilize qualitative methodologies that include interviews, case studies, and observational strategies of inquiry (Patton, 2002). Disparities within healthcare systems must be reduced in order to facilitate patients' success, which may additionally include the simultaneous education of the caregiver and community support system (Madden et al., 2011). National standards for diabetes self- management education (DSME) are focused on improving a patients' ability to comprehend educational materials that inform healthcare decision-making, and facilitate self-care behaviors that result in optimal health outcomes (Funnell et al., 2011). The American Diabetes Association detailed the need for assessment of patients' beliefs, health literacy level, and attitudes in the development of material to facilitate effective self-management of diabetes (Funnell et al., 2011). Despite an increase in patient education materials, there continues to be a large deficit between the health literacy of a population and the health literacy level of such materials (Badarudeen & Sabharwal, 2010).

Gaps and deficiencies in the literature consist of three factors pertinent to self-management of disease: culturally pertinent understanding of material (Gumbs, 2012), ability to translate education into daily life (Madden et al., 2011), and clinician sensitivity and bias (Stuard & Blair, 2011). While Spencer et al. (2011) detailed that self-care materials are to be tailored to the types of patients, Hawthorne et al., (2008) detailed that diabetes management results from identification, acknowledgement, and mitigation of ethnic disparities. While self-efficacy promotes management of disease, it is a combination of cultural and health literacy that is aligned with optimal self-care for the African American population (McCleary-Jones, 2011). Society's inattention to culturally sensitive care negatively impacts informed decision-making (Kressin et al., 2008). Additionally, discrimination while subtle, can pertain to beliefs and culture that prevent active participation in decision-making (Shavers et al; 2012). Interestingly, non-White populations access health care information more than White populations (Rooks, Wiltshire, Elder, BeLue, & Gary, 2011). However, communication processes between clinician and Black patients are disparate due to clinician bias (Stuard & Blair, 2011).

Self-management of disease is a proven documented gain however, Hibbard, Greene, & Tusler, (2009) detailed that race and ethnicity were not stratified as part of the study. Such finding concurs with Andrulis, et al., (2010) evaluation that cultural and ethnic diversity is lacking as part of patient centered care. African Americans have difficulty in evaluating their health status, which requires further investigation into how this topic is understood (McCleary-Jones, 2011). Additionally Shacter et al., (2009) concluded that information (knowledge) without comprehension does not improve diabetes related outcomes in African Americans.

The literature reveals that while African Americans are genetically predisposed to diabetes, the disease responds well to individual-management and modification of risk factors (Gumbs, 2012). The literature addressed racial disparities related to socioeconomic concerns and the attitudes of physicians pertinent to race concordance (Kressin et al., 2008; Snipes et al., 2011). Patient centered care is essential to promote self-management and tailoring of the curriculum to the ethnicity of the patient and caregivers (McDonald et al., 2009). While Rooks et al., (2011) found African Americans utilized health information to treat health concerns rather than access a provider for care; African Americans were less likely to participate in self-management education (Gumbs, 2012). Additionally, below par glucose control hemoglobin A1C are key laboratory values in determining diabetes control; and are evidence of this culture’s inability to adhere to provided treatment and education (Shacter et al., 2009).

Prior to the Shacter et al., (2009) research, qualitative studies had not been employed to study the barriers to glucose control amongst races. Schillinger & Keller (2012) detailed the need for clinicians to pay attention to the content of educational material to include: graphics, page layout, and culturally utilized words within a concise summary of action items, in order to promote comprehension and facilitate self-care.

My study aimed to explore which elements of diabetes education material are the most useful for African Americans pursuing self-management of their disease. The discussed literature reveals that health literacy, language, communication, trust, and literacy, are important to facilitate a patient’s comprehension of educational material. However, the inclusion or exclusion of cultural nuances that promote the African American’s successful self-management of diabetes is not known. Similar to the many previously discussed social science and nursing studies, the qualitative approach solicited input from culturally diverse participants to include African American patients via an individual interview process. This study specifically focused on the African American Houstonian, and input was solicited relevant to distributed standardized patient education material that was given to all group participants, regardless of race and ethnicity. The research questions were focused on the preference and usefulness of text, graphics, pictures, and color. Additionally, research sub-questions asked if family support was important and if barriers to self-management of diabetes existed.

Patients’ cultural preferences can be addressed by improving communication between clinicians, healthcare facilities and the patients (Paniagua & Taylor, 2008). This study is relevant and significant for the African American Houstonian who requires cultural specific education to promote self-management of diabetes. With diabetes in the African American population on the rise, it is essential that self-management education content be comprehended to facilitate healthy behaviors. This research could positively impact the cost and quality of diabetes care by decreasing healthcare utilization locally and nationwide. Chapter 3 details the research design and methodology, the strategy of inquiry, participant sample, data collection, and subsequent analysis.

Chapter 3: Research Method

Introduction

The purpose of this qualitative study and ethnographic approach was to explore what elements of diabetes educational material African Americans found most useful to facilitate self-management of their diabetes. Hawthorne, et al. (2008) claimed that understanding of educational material is necessary for self-management to be effective, and that the lack of research specific to ethnic minorities and self-care is of concern. Houston, Texas is a legitimate focus of study because more than 30% of Houston's population is African American, a genetic predisposition to diabetes which requires effective self-management (United States Department of Commerce, 2012). Learning cultural nuances specific to health care management is important for a population that is genetically predisposed to diabetes (Kressin et al., 2008; The Centers for Disease Control, n.d.).

This chapter explains the purpose of the study and that the main research question is to explore what elements of diabetes educational material do African Americans find most useful for self-management of their diabetes. The study's qualitative research design, ethnographic approach, and rationale are explained, as is the interview strategy of inquiry and associated data collection tools and analysis. Strategies to establish credibility, transferability, confirmability, and dependability are delineated. Additionally, the elements involved in the use of the coding software, ATLASti© are discussed. The chapter concludes with the expression of potential ethical concerns and strategies to address such.

Research Design and Rationale

The central research question was to explore which elements of diabetes educational material do African American adults find most useful in self-management of their disease. Sub-questions are:

RQ1. Do African Americans, compared to other races and ethnicities, find diabetes easier to understand if the material is delivered and discussed at the time of the group session, or given after the group session as a take-home brochure?

RQ2. What do African Americans identify as barriers to understanding the standardized diabetes health education material utilized, as compared to other races or ethnicities?

RQ3. What type of material is more useful to the African American patient compared to other races and ethnicities in self-management of their diabetes: material containing pictures, graphs, tables, Likert scales, only text, or some other form of visual aid?

RQ4. Do African American patients with diabetes, compared to other races and ethnicities, find the use of color in educational materials to be more useful in understanding the material than black and white?

RQ5. What type of educational assistance material is used in the home by the

African American patient (e.g., papers, brochures, videos, or audiotapes), and how does this compare to members of other races and ethnicities?

RQ6 – Do African American patients with diabetes share their health information with families, caregivers, and/or faith based community organizations, and how does this compare to other races and ethnicities?

This study examined adult African Americans with diagnoses of diabetes. Diabetes is a chronic disease and is classified as type 1 or type 2. Type 1 is a disease of childhood and one that requires insulin administration to control blood glucose. Type 2 diabetes is an adult form of diabetes and responds well to oral medications and to changes in dietary intake. Diabetes control responds favorably to patients' self-management, suggesting strong benefits for understanding which elements of educational material African Americans find most useful in managing this disease (Centers for Disease Control, n.d.).

Several facets of this issue suggested the appropriateness of a qualitative paradigm for exploring this disease of diabetes' treatment and management. The inductive nature of a qualitative paradigm was especially appropriate because literature pertinent to this topic is scant; as suggested by Creswell (2013), this paradigm facilitates expanding upon existing knowledge. Diabetes self-management is personal in nature, and the qualitative paradigm permitted the individual collection of patient data (Keenan, 2013). The qualitative data retrieved was expressed in words (Patton, 2002) and the ethnographic approach aligned well with the study of the African American culture

(Keenan, 2013). An ethnographic approach facilitated the optimal identification of African American cultural behaviors and learning patterns that are pertinent to self-management of diabetes. Interviews were conducted over three weeks, including pre-interview (recruitment) observations (verbal), actual individualized interviews that were simultaneously recorded, and facilitated the answering of my research questions. This research was conducted utilizing individual patients, who represented the lowest units of analysis suggested by Patton (2002).

Role of the Researcher

As a participant researcher, I asked the interview questions utilizing a self-developed interview protocol (see Appendix A). The role of the researcher is to secure data via unobtrusive or non-disruptive means and I assured that performing the research did not intrude, disrupt, or harm the participants in any way (Creswell, 2013). As a participant, I engaged each patient in a voluntary question and answer session while simultaneously studying their vocal tone, pitch, verbal pauses, or hesitancy in dialogue. Additionally, the 10 classrooms used as research locations within the 10 ambulatory health center clinics utilized for recruitment of study participants remained unaltered. As a registered nurse administrator, I am aware that potential ethical concerns or biased opportunities in retrieving the data could have occurred. I utilized a “gatekeeper” to introduce me to the existing attendees of the patient education classes and to whom I discussed the research study and invited individual self-selection as a participant away from the class setting (Creswell, 2013, p.154).

I took several actions to reduce the potential for bias and conflict of interest. I ensured that none of my direct reports were selected as the gatekeeper or involved in the research. While I was aware of the 10 sites where the diabetes education occurs, I was not privy to the patients who attended the classes. I selected an initial minimum of three sites (clinics) to commence the purposeful sampling of a diverse cultural and racial patient population that included African Americans. I am not professionally a subordinate of or personally related to any of the physicians attending the classes or who treat any of participants with diabetes.

Conducting this study within my employer’s ambulatory health centers required me to complete an on-line Social and Behavioral research course prior to the submission of the Institutional Review Board (IRB) application. This process required me to identify the patients as a vulnerable population and detail how data collection and any potential protected health information (PHI) would remain confidential. Patient educators, patient Council at Large members, and medical directors of each community health center, were reassured patients would not be treated disparately, and that the findings would be transparently shared and patient data would be de-identified. Similarly, as researcher I provided a full disclosure that there were no conflict of interests and no incentives were promised or distributed to patient participants.

Methodology

Participant Selection

The population sampled consisted of adult male and female patients aged 18 years of age or greater, English-speaking, and who had been diagnosed with diabetes mellitus. This age group was selected based on the ability for each participant to give informed consent, and having had life experiences including roles such as spouse, caregiver, student, employed, unemployed, or retired. All of the participants additionally had received primary care within Harris Health System in Houston, Texas prior to participating. Criteria for participation were: being 18 years of age or older, having a self-reported association or affiliation with an ethnic or racial group to include that of African American, speaking English as their primary language, and possessing a diagnosis of diabetes mellitus type 1 or type 2 from an associated primary care physician. The criteria did not exclude participation based on the prescription of oral medications or insulin to assist in blood glucose control. Additionally, there was no minimum or maximum amount of time that a patient must have been diagnosed with diabetes mellitus.

Sampling

Sampling was purposeful and homogenous. This method often yields a smaller sample size with a higher variation than other methods, but is also more likely to be representative of the population being studied (Maxwell, 2013). The target population was drawn from ten community health centers within the Harris Health System that offer diabetes group education classes. Patients attending these centers are of diverse cultures and races, including Hispanic, Caucasian, Asian, and African American. The diabetes classes/visits are offered at least twice monthly, are voluntarily attended, and are held in no specific sequence so each patient may commence at their convenience. The purposeful sample size was easily accessed, the data to be collected was readily available, and the data was captured in entirety to facilitate the complete retrieval to result in optimal value.

Recruitment

Recruitment commenced following IRB approvals from Walden University (2014.06-0614:20:05-0500) and my workplace. As the researcher, I secured the publicly posted flyers for diabetes education class in English, and scheduled attendance based on the dates and times stated. The patients were purposefully sampled commencing with the next available scheduled class on the Monday following the receipt of both IRB approvals. I attended the last few minutes of each diabetes education class, and after being introduced I explained the research study and the consent process to the class participants. To mitigate peer pressure specific to participation, I asked each participant to speak with me individually upon leaving the class, to ascertain if they desired more information, reassured them that there was time to decide regarding participation, and requested a telephone number for future contact. I also discussed a venue of the patient's choice for proposed individual interview or via telephonic means if the patient was unable to return to a location. It was acceptable if the patient after the class had already decided on participating in the study, and agreed to sign the consent form after I explained the consent form in detail and answered any questions posed to me. The classes occurred during a Monday through Friday workweek and between the hours of 8am and 5pm. As the researcher and an employee of Harris Health System, I mitigated bias by selecting participants from 10 of the 12 clinics of which I had no knowledge of the class participation, and in which I had never performed in the role of nurse educator.

Inclusion criteria was based on the patient's age of 18 years or greater, the diagnosis of diabetes mellitus, and English speaking with an assigned primary care physician. A diagnosis of diabetes mellitus was accepted for the inclusion criteria only if a medical provider had assigned such to a patient, and had prescribed a plan of treatment which included a referral to either a diabetes educator or a diabetes educational class.

Sample Size

Each diabetes educational class conducted within the select centers was comprised of an average of 3-10 patients of which 3-6 commonly self-identified as African American. It was anticipated that the purposeful sample size would be between 30-60 participants of which 18 -24 patients would be of African American affiliation, and were potential participants for the study. If recruitment of patients yielded declinations to participate, then the next scheduled diabetes education class was attended in the same manner, until at least 30 patients were recruited, of which 18 self-reported as being of African American race or culture, and voluntarily consented to participate in the study. Homogeneity within the sample size was met with all participants having been diagnosed with diabetes.

Instrumentation

Interview Protocol

The selected strategy of inquiry is more effective when used as part of an interview protocol (Creswell, 2013). The interview protocol (see Appendix A) was derived from researching two academic textbooks: Creswell (2013) and Patton (2002). My protocol included the required elements of participant identification, the date, time and location of the interview, an introduction to the study, participant self-affiliation with a race or ethnicity, followed by sequential open ended questions. Additionally, the protocol instrument served as the document where marginal notes, observations, verbal nuances, and conversation flow to include pauses, were documented during the interview process. Introductory questions focused on the comfort of the participant, (room environment, (and participant safety if a cellular mobile telephone was used) and positive confirmation of the prior agreement to participate in the study. As the interview protocol instrument was researcher developed, I requested that a peer experienced in research instrumentation development evaluate the protocol for content validity prior to use.

A tape recorder was the second instrument utilized for the collection of data verbally relayed by the participant in responding to the questions. The tape was of 90 minute length which was at least twice the length of the allocation of the maximum allocated interview time of 45 minutes. I ensured the tape recorder was in working order and had sufficient recording space available. Additional tapes were present at the interview location to ensure continuous data retrieval, which provided integrity to the interview process (Patton, 2002). Use of an interview protocol and a tape recorder facilitated the capture of the participant's verbal responses to the questions in order to answer my study's research questions. The tape recorder additionally captured word for word the answers to the interview questions posed, and facilitated the word for word transcription documentation that was essential for the analysis and coding of the data.

Data Collection

All data was collected via the interview protocol (see Appendix A) during the interview process with the patient participants. The interviews were individualized and conducted in a private location where the questions were posed to the participant telephonically based on participant's request. A tape recorder also collected the interview verbal data and facilitated accuracy in post-interview transcription and analysis (Patton, 2002). The interview protocol facilitated the retrieval of data specific to answering the research questions, pertaining to which elements of diabetes education African Americans find most useful in self-management of their disease. All of the interview questions were asked in sequential order unless the participant declined to answer, a previous question required clarification, or such was revisited later in the interview process. Declinations (none) would have been noted both manually on the interview protocol document and also verbally voiced into the tape-recorder. In the role of researcher, I was the data collector, and retrieved data during an individual interview session that was not anticipated to last longer than 45 minutes. While a contact number was provided to the participants at the end of the session, there were no additional responses or conversation specific to the interview protocol solicited following the cessation of the interview. However, questions that were asked by the participants were tape recorded and also documented during the individual interviews. The tape-recorder was tested for functionality prior to each individual interview session, and the participant was identified alphabetically and numerically in order of the interview sessions. The identifiers were voiced by me into the tape recorder. The participants and their associated data were de-identified as part of the data documentation, analysis, and will remain so in any future presentations.

Recruitment

Participants were recruited from my workplace and were existing patients of the health system. Patients were recruited via my attendance at the end of an existing diabetes education class where I discussed the research study, informed consent, and then privately and individually after the class, sought participation self-selection into the study. When recruitment of potential participants was not achieved at any site, the next scheduled diabetes class at another or same site was attended. If the scheduled interview was not attended, and the telephonic option after six attempts to contact was unsuccessful, the participant was labeled as a no contact and defaulted to a status of deactivated in the study. This process was consistently applied to the 10 sites selected, and sampling continued until a minimum of 30 participants of which 18 were African American had self-selected and voluntarily consented to be part of the study.

Exit and Follow-up

The study began with securing the regularly scheduled, publicly posted diabetes education class details at Harris Health System’s community health centers. Attendance at the classes procured self-selection of participants and the receipt of informed consents to participate. The study as expected successfully concluded for the participants when all the interview questions had been asked, voluntarily answered or declined, and any questions from the participants had been answered to their satisfaction. The study ceased for me when the analysis was complete, the data was safely stored and the information was in a presentation format. However, the participants were able to halt their voluntary participation in the study without cause and at any time. Similarly, the participants were free to decline to answer any questions posed. Telephonic contact information was provided to assure a means to voice questions or concerns post interview was relayed, and to secure a time and location for presentation of the findings to the participants (member checking). Participants have an unlimited timeframe within which to utilize the contact information. Additionally, the study was concluded when I completed and presented findings to the participants and an end of study notification form to my workplace IRB (see Appendix C).

Data Analysis

Analysis commenced with a preparatory process delineating a plan of how coding was to be accomplished (Patton, 2002). The interview protocol facilitated data collection that when categorized and analyzed readily answered the research questions. The interview protocol document additionally served as the tool that I utilized to document marginal notes, verbal behaviors, and the participants' responses to the posed questions. Analysis included organization of the data and review of marginal notes, transcripts, tape-recordings, and ultimate storage of the data (Miles & Huberman, 1994). In accordance with my workplace and Walden University's regulations, all the data was stored in a locked safe with a self-selected numerical combination entrance code and will be maintained for five years. The audio recordings were transcribed and dated in descending order of retrieval and aligned with the alpha-numeric participant identification method that is known only to me. The manually documented interview data, and the interview protocol was loaded with the accompanying participant audio recording into ATLASti© a software coding program.

Coding initially began with a manual review of the interview data (transcripts) to identify phraseology and categories of common words and ideas. Similarly, the interview notes were manually annotated by circling identified themes and patterns. Listening to the audio recordings at least twice, permitted the retrospective documentation of identifiable changes in the participants' tone of voice, and revealed key elements of the interviews that may have been initially missed (Miles &Huberman, 1994).

I utilized the ATLASti© software to group repetitive patterns of words, sentences, and verbiage which was solicited as part of the interview process. It was anticipated that the initial manual identification of patterns and themes (pre-coding) may have precipitated the visualization of categories and patterns within the software (Miles and Huberman, 1994). If interview data and audio recordings were incomplete due to a participant's declination to answer a question, such would however, still have been analyzed, coded, and stored in the same manner as completed interview protocols. All data retrieved was considered part of the study.

Trustworthiness

Credibility

Credibility of qualitative inquiry depends upon the assurance of researcher credibility, utilization of rigorous methods, and the researcher's belief in the credibility and value of the inquiry strategy used (Patton, 2002). Prior to analysis I again reminded myself of the potential for researcher bias, and that my expertise in disease management could have influenced interpretation of the data retrieved. I repeatedly reviewed and evaluated the data for patterns and themes. Findings of unexpected data or themes provided rigor to the future presentation of alternative explanations to the research questions, regardless of how disproportionate and contrary the data may appear. Negative and unexpected findings are included in the final reporting and presentation of the results.

I collected data via tape recordings and the use of a structured interview protocol. However, these data sources while collected simultaneously were also checked against each other to assure that the same interview questions were posed to each participant. The observations (verbal) and notes documented on the interview protocol document were cross checked with the audio recordings to ensure optimal accuracy in capturing the thick and rich descriptions required for research credibility. Reflexive triangulation (Patton, 2002) added to the credibility of the analysis by securing a non-participant colleague to review the data captured. In this manner, the healthcare professional evaluated the data collected from the perspective of potentially utilizing the data, following presentation of the findings.

Transferability

The purposeful sample size of 30 with a subset of 18 African Americans, cannot be generalized to a larger or phenomenological different population, but is limited to the settings, population, phenomenon, and age group of the participants studied. However, the purposeful sample size does possess rich information relevant specifically to the African American adult (18 years of age and older) with a diagnosis of diabetes type 1 or type 2, which meets the “Principle of Discriminant Validity” (Patton, 2002, p. 581). Given the “Principal of Proximal Similarity” (Patton, 2002, p.581) it is anticipated that generalization may be possible to the same target population (adult African Americans) with the same phenomenon (diabetes) and to the same clinic locations utilizing the same standardized educational material. Alternatively, logical extrapolation of the data to similar settings may be possible given the proposed detailed and rich thick descriptions documented as part of the data analysis retrieved from information rich participants.

As the researcher and a health care professional I have positive beliefs associated with the value and credibility of a qualitative interview strategy of inquiry. As a result of purposeful sampling, the African American population that participated in the study was information rich, and as expected possessed specific data that answer the research questions that are aligned with the ethnographic approach. To establish my credibility as a researcher I discussed my current progress at Walden University, and the IRB approvals received. I presented myself as a health care professional with expertise in the field of disease management and my resume was part of the research IRB application. I disclosed potential biases and indicated that a researcher expert evaluated the instrument for data collection.

Dependability and Confirmability

Audits were conducted by an expert researcher in my workplace who was not associated with the study but is experienced in qualitative data collection and analysis. The audit review evaluated the process of data collection, the findings, and ultimately established the dependability of the analysis. Additionally the role of the URR expert is essential to audit the data and analysis to ensure the research is of high quality.

Ethical Procedures

Research was conducted in an ethical manner with respect for human dignity and the rights of the individual (Patton, 2002). My study had several ethical aspects that needed to be addressed. Initially, I completed two IRB applications, one for Walden University initially to seek and receive conditional approval, prior to applying to my workplace’s IRB. I paid particular attention to the vulnerability of the population being studied, which included a minority race (African American) and the status of being a patient. Human subjects are to receive full disclosure of any researcher bias, the purpose and extent of the study, how the data will be utilized and to whom will the findings be presented and the data shared (Maxwell, 2013). I disclosed my position as associate administrator with Harris Health System and outlined that I was not acquainted with any of the participants, nor do I participate in direct education of any patients.

I disclosed potential researcher bias related to my expertise in disease management and the fact that I have an awareness of the education materials utilized. This expertise could have influenced me in predetermining the most effective material to use for diabetes education. Additionally, my work with culturally diverse populations could have resulted in assumptions specific to cultural competence that may have influenced my development of the interview questions. The integrity of the study was paramount so I mitigated these biases by having a researcher outside of my department evaluate the interview tool for bias and cultural competence. I obtained informed consent by discussing the entire document that outlined consent for participation, the extent of the study, the ability to decline participation or exit the study at any time without recourse. I also explained to the participants that their consent is only valid for the period of this study and no consecutive research is to be conducted. I was diligent in clearly explaining that participation was voluntary and in no manner is connected to current or future treatment for diabetes, or any other illness as a result of participation or declination. The participants were informed that the interview was to be recorded and all data retrieved would be de-identified from the beginning of the interview and continue systematically during analysis and reporting. Additionally, I detailed that I have no conflict of interest by conducting research in my workplace, and none of the data was entered into any patient's electronic medical record. I discussed that the de-identified data would not be shared with any other party prior to analysis, but the findings were likely to be shared and reported at professional conferences, research symposiums, and to healthcare professionals seeking to improve population health and manage chronic disease.

The informed consent (see Appendix D) is a standardized tool that was generated and required for my workplace research. The document outlined the risks of the study, anonymity, patient confidentiality, and the right to ask questions, pre-study, during the study, and post study. Following receipt of the participants' signatures a copy of the informed consent was given to each patient, and the originals were stored in a locked safe and will be maintained for a period of five years as mandated by my workplace. In accordance with my workplace's policy, the existing patient educators were aware of the research as were the community health centers' Patient Council at Large members. Of utmost importance was the necessity to be open-minded, retrieve the data accurately, and facilitate the rich thick descriptions that are synonymous with a quality transcript (Patton, 2002).

Summary

Chapter 3 has discussed the purpose of the study and the research questions. The methodology, approach, and strategy of inquiry are detailed, and the accompanying sample size and recruitment procedures are explained. The instrument tool utilized and the process of analysis and coding are explained, and the IRB processes and ethical procedures to assure confidentiality, credibility and validity to the study are outlined. Chapter 4 will provide an introduction to the research setting, participant demographics, and how the data was retrieved, stored, and analyzed. Lastly, results and trustworthiness of the study will be detailed. Chapter 5 will reiterate the reason for the study, the subsequent findings and their interpretation with discussion regarding implication for clinical practice, and the potential impact on society at the local, state, national, and global levels.

Chapter 4: Results

Introduction

The purpose of this study was to explore how the African American race and culture may alter a patient's perception of diabetes health education. This study was necessary to capture new knowledge that will assist the African American diagnosed with diabetes to improve self-management of the disease. Thirty percent of Houston Texas' population is of the African American race (Centers for Disease Control, 2013), of which 25,000 are diagnosed with diabetes. This study was crafted to inform the development of meaningful and useful patient education material, facilitate improved self-management of disease, and contribute to future decreases in healthcare cost. Such data is essential to promote patient self-management as defined by Bandura's (1997) theory of self-efficacy as requiring the elements of comprehension, attention, retention, motivation, and production.

This study's findings are specific to the African American participants' preferences relevant to the content, the setting, and the delivery method of diabetes education. Group sharing, assistance of caregivers, and a daily need to refer to past educational material, are examples of a few results that it is hoped will aid in the improved self-management of diabetes. Optimal self-management could decrease complications from diabetes, resulting in decreased medical utilization, and the lowering of health care costs, as outlined and required by the Affordable Care Act (DPC, 2009).

Six research questions were developed for this study that when answered would detail the elements of patient education material that African Americans find most useful in self-management of their diabetes. Each research question was linked to a question (or questions) on the researcher developed interview protocol. The six research questions were:

RQ1. Do African Americans, compared to other races and ethnicities, find diabetes easier to understand if the material is delivered and discussed at the time of the group session, or given after the group session as a take-home brochure?

RQ2. What do African Americans identify as barriers to understanding the standardized diabetes health education material utilized, as compared to other races or ethnicities?

RQ3. What type of material is more useful to the African American patient compared to other races and ethnicities in self-management of their diabetes: material containing pictures, graphs, tables, Likert scales, only text, or some other form of visual aid?

RQ4. Do African American patients with diabetes, compared to other races and ethnicities, find the use of color in educational materials to be more useful in understanding the material than black and white?

RQ5. What type of educational assistance material is used in the home by the African American patient (e.g., papers, brochures, videos, or audiotapes), and how does this compare to members of other races and ethnicities?

RQ6 – Do African American patients with diabetes share their health information with families, caregivers, and/or faith based community organizations, and how does this compare to other races and ethnicities?

Chapter 4 provides a brief summary of the purpose for the study, the research questions, and nuances of the telephonic setting that may have influenced the patient's responses and data collected. The culturally diverse population sampled and relevance to the African Americans as the focus of this study will be detailed and accompanying methods for data collection (interview protocol, tape recording) and resulting process of manual and electronic analysis will be discussed. Additionally, the elements of trustworthiness to include credibility, transferability, dependability, and confirmability of the study and resulting findings are provided. Lastly, a summary of chapter 4 content and answers to the main and six subset research questions will be provided and then lead into a transition to chapter 5.

Setting

As anticipated, the settings for recruitment of the population sample remained as the patients' community health centers where diabetes education classes were attended. I conducted recruitment by attending the last few minutes of publicly posted and scheduled diabetes classes and/or visits located at 10 Harris Health System community health centers. As the researcher, I was not privy to details about the attendees, their specific difficulties, or their challenges in comprehending diabetes health education materials. I deemed these patients’ motivation to be optimal, however, on the basis of their voluntary participation in the diabetes classes or visits.

I initially planned to mitigate the potential influence of peer pressure by discussing the study during the last few minutes of education classes and then discussing the consent document and seek voluntary patient participation individually after the class ended. However, some patients verbally volunteered during the class while I discussed the consent process. Despite these public agreements to participate in the study, I adhered to the research protocol for obtaining consent and still discussed the study privately with each patient. I also discussed the consent form and answered patients’ questions. Oftentimes consent was given and the relevant signatures were retrieved. Occasionally the consent document was given to allow time for patients’ further consideration. Because some patients did not agree to participate, I was comfortable that the unsolicited and public sharing of patients’ willingness to participate in the study did not place undue influence on their peers to also participate.

I first reminded participants who wished to sign the consent form that I would contact them telephonically to discuss a time and venue of their choice for the interview. Telephonic interviews were the preferred medium selected by all of the participants. I attributed this selection to the patient population being predominantly uninsured and under-served, with transportation being a cause of concern. I was previously familiar with this general population and associated travel concerns and planned accordingly. I proactively prepared a telephonic script to assure the participants were aware of telephonic recording of responses during the initial call and also during the diabetes class discussions. This was intended to give the participants time to further evaluate their agreements to participate and have the interview audio recorded.

I credit this method of ensuring transparency between the participants and me prior to the actual telephonic interview with building an important researcher-participant rapport. This rapport may have contributed to the high telephonic answering rate by 30 of the 36 initial participants recruited. This patient population is, based on my past clinical experiences, often uncomfortable answering the telephone for fear of debt collectors and as a result tends to not answer the telephone or provide an unusable number to clinic staff. My ability to establish a rapport with the prospective participants resulted in the unsolicited delivery of cellular telephone numbers to facilitate the answering of my call. These factors collectively make me confident that the data collected telephonically was given freely, giving value and validity to the analysis and ultimate results.

Demographics

This study specifically addressed and studied African Americans diagnosed with diabetes in the Houston area. However, a purposeful population of all races and cultures was sampled in order to compare general data with that of African Americans. All participants were 18 years of age and older, although the age was not a factor included in the analysis. Each participant had a diagnosis of type 1 or type 2 diabetes and was being treated by a Harris Health System primary care physician. Regardless of race or culture all participants spoke English as their primary language, even if they were from another country (one participant). Such assumption was further corroborated by their voluntary attendance at English speaking only diabetes class or visit. Of the 30 participants in the study, 18 self-reported as African American/Black, 6, White, 1 Asian, 1 American Indian, and 4 were Hispanic/Latino. There were 22 female and 8 male participants.

Adults aged 18 years of age and older were selected for recruitment due to the nature of being eligible to be of sufficient age to make independent healthcare decisions such as give informed consent. Additionally this age group was likely to have had the potential for life experiences such as the roles of spouse, caregiver, or employed. Such life experiences can create challenges to managing the disease of diabetes, and self-management was the focus of this study. Of the 30 participants 18 were African American/Black in order to have greater than 50% of the population sampled be of the focus group demographic. The remaining races of White, Asian, American Indian and Hispanic/Latino were necessary to use the comparison data collected to ascertain if the responses by the African Americans were indeed race specific. Such comparison is relevant to drawing conclusions regarding similarities and cultural nuances, in how best to develop self-management education for African Americans. Additionally as the participants all voluntarily attended the diabetes classes or visits, it was a viable assumption that the attendees were eager to learn about their diagnosis of diabetes.

I attended classes for patients newly diagnosed with diabetes, and also classes that offered support and refresher information. It was interesting to note, both by attending the classes and during the telephonic interviews that the classes, were attended regardless of their intended audience. An example is that a participant with diabetes for 20 years continued to attend class for patients newly diagnosed, and also the support groups because such was deemed as valuable. Additionally, of importance was that each participant had received the same standardized patient education material, which facilitated a reference point for discussion during the interview dialogue.

Data Collection

Participants

A total of 30 participants took part in the study, of whom 22 were female and 8 were male. While age was not a factor in the collection of data for analysis, all participants were 18 years of age or older. Of the information voluntarily given to me (not requested) I was made aware of ages ranging from 22 to greater than 70 years of age. Eighteen participants self-reported their race or culture as African American or Black. The remainder of the participants comprised of 6 White, 1 Asian, 1 American Indian, and 4 Hispanic/Latino races or cultures. All participants were English speaking and the informed consent document was in English. For those participants who self-reported as being of Hispanic or Latino culture, such were recruited as a result of the patients' acknowledgement that their primary language was English, also evidenced by their enrollment and attendance at an English speaking diabetes class or visit. The informed consent document and the interview protocol questions were in English, and Spanish speaking participants were not recruited as the documents were not tested for such a demographic. Additionally, African Americans attend English speaking diabetes classes and as they were the population to be sampled, such patients would not have been accessible by attending classes for Spanish speaking patients.

Each participant provided voluntary informed consent prior to the collection of data, and each received a copy of the entire signed document. Each signed consent form received was stored in a locked combination safe with the numeric code known only to me. One interview protocol consisting of 3 invitational questions, 1 race/ culture self-disclosure question, and 10 specific questions were asked of each participant in sequential order. As the interview protocol was used to document marginal notes and participant specific data, such were also stored after each interview in the same locked combination safe. An alpha-numeric code was assigned to each participant at the conclusion of the interview in order to accurately identify the participant upon a return telephone call that relayed previously given responses to facilitate member checking. Such a code was necessary in order to de-identify the participant but ensure that correct data was relayed to the correct participant, without the use of protected health information.

Location of Interviews

Each participant was given the option to select a location of their choice from three options presented. The options were to attend any community health center, any other Harris Health System location, or for those with difficulty for any reason, a telephonic option was also given. Initial contact with all participants occurred during recruitment, by attending publicly posted diabetes classes or visits within Harris Health System community health centers. Following discussion of the purpose of the study and details of the informed consent, each interested or consenting participant was individually asked for a location of preference for the interview. With consistency and clarity, all the participants overwhelmingly selected to have the interview conducted telephonically. I was aware that telephonic interviews had the potential to yield less data pertinent to a lack of visual observations that may have occurred during an in-person interview. However, the willingness portrayed at the time of consent and the high percentage of participants reached, increased my reassurance that data would be meaningful and I would focus on tone of voice, intonation, jargon, hesitancies and pregnant pauses. As the location of the interview was telephonic, I conducted such from my workplace, in a private office without use of the speaker function to avoid anyone accidentally overhearing any part of either side of the conversation.

Frequency and Duration of Interviews

A telephone log was utilized to collect voluntarily rendered participants' telephone numbers. Some were land line connections and over 50% of the participants elected to provide their cellular number in order for me to assure ease of contact at a future date. For participants that eagerly voiced a desire to participate I asked for a preferred time of day to conduct the telephonic interview. In this manner I aimed to secure preferences in order to facilitate an unrushed and comfortable environment for the participant. I requested that if I should call during a time when the patient was in transit, for reasons of safety, I would make a return call. Similarly, for purposes of confidentiality I discussed with the participants that I would not leave a message if there was no response.

At each answered telephone call I again asked as part of the interview protocol if the time and location were still conducive to answering the interview protocol questions. Based on my experience in disease management with an uninsured and underserved population, telephones too can be of a transient nature, evidenced by patients purchasing pay- by-the minute disposable telephones. As a result I attempted to contact by telephoning each prospective participant (with a signed consent form) that I had been unable to reach a maximum of six times. After the sixth and unsuccessful attempt the patient's name was noted as unable to be contacted on the telephone log, and the patient was no longer considered a prospective participant.

The telephone calls were made over a period of three and a half weeks in the month of July 2014. Of the 36 patients recruited, five were unable to be reached by telephone after six attempts. One patient's spouse answered the telephone and used my name and voluntarily informed me that the prospective participant (wife) was taken to the hospital. The spouse had attended the class with the prospective participant and I had received permission to speak to the spouse should the telephone be answered by him initially. I offered my sadness for the spouse and his wife, and I discussed per protocol that I would remove his wife from the list of participants. The remaining 30 actively participated in the interview process. The interview protocol was the sole document utilized to retrieve responses from each participant following a telephone script that informed each participant of the need to audio record the interview, and to again seek their approval prior to utilizing the interview protocol. The length of the interviews ranged from 13 minutes to 42 minutes. To facilitate the optimal interview environment, I asked each participant if the time of the call was still acceptable and there were no interruptions anticipated. Telephone calls were not conducted in any specific order. However, I aimed to have no longer than a week's time interval between the diabetes class attendance and the actual initial telephone contact, to promote memory of my name and continued intent to participate.

Data Recording

Data received from each study participant was recorded manually utilizing the interview protocol and also captured specific notes relevant to that particular interview. I documented the assigned demographic data (code) on the interview protocol document. The alpha numeric code was comprised of a letter to symbolize the race or culture, and the number represented the number of African Americans to date that had participated.

An example was AA for African American and the number 16 represented the 16th African American who participated (AA16). A unique demographic code was given verbally to all participants in order to ensure confidentiality (no name) in data collection, analysis, and ultimately reporting. Additionally, the code was for the patient to relay to me upon my return call for confidential member checking, to assure that the information I had documented during the interview process reconciled with that of the participant's responses. The telephone log containing the participants' names and telephone information, were per my protocol, destroyed after the last telephone call was made to complete member checking. Such ensured there was no link retained between the data and the name or location of the patient.

In addition to the documentation of participants' responses, following participant consent, each interview was audio taped. A non-digital tape recorder was utilized with a built in microphone and earphones. This technology facilitated greater quality in the audio recording and an earpiece promoted ease of use. The tape recorder had 2 speeds for recording and two for playback. The slower speed for recording facilitated the capture of pauses and hesitancies, and the slower replay capabilities assisted me in transcription. Following each interview the tape and interview protocol with accompanying notes were stored in a locked combination safe.

There were no variations in the data collection from the expected process except that participants were more readily willing to answer my telephone calls and converse at length about their challenges with diabetes and also their family history. Such active participation was welcomed and optimized the ability for me to gather thick descriptions which gave rigor and credibility to this study. Only one unusual circumstance occurred during the data collection and such was information relayed that a prospective participant was in the hospital. Per protocol the patient's name and telephone number were removed from the log and an inactive status was documented. Following three attempts to contact the 30 participants for member checking, only 15 were able to be contacted.

Data Analysis

Analysis commenced with the collection of manual and audio recorded data, and the downloading of ATLASti© software to my computer. All audio recordings were imported into ATLASti© in the sequential order of their retrieval. Each audio recording imported into ATLASti© became a primary document and was organized within the project manager (Friese, 2014). Each primary document in ATLAS.ti© then became individual files of data comprised of each participant's individual responses to the questions posed during the interview process. ATLASti© facilitates two levels of analysis, the first being descriptive, and the second conceptual (Friese, 2014). The descriptive analysis commenced with a manual review of the data collected and the decision as to how to code the data. Such process provided the infrastructure from which to expand the codes to promote more detailed and meaningful categories and "families" (Friese, 2014, p. 119). The first codes developed were to establish the demographics and sex of the participants. Each audio recording in ATLASti© was reviewed for content that detailed the self-reported race and culture and the sex of the participant. I then applied a label to the audio recording that denoted the order of the interview, the sex, and the race of the participant. These discrete entries enabled me to organize the audio recordings and categorize the number of females, males, and their associated demographics. An example of such was an African American female who was the seventh interview conducted and was coded as 07_f_aa. The underscores denote a discrete data point facilitating the separate capture of each of the three elements.

The second step in the descriptive analysis was to develop a list of codes and their associated definitions which added transparency to my analysis. The simple codes developed aligned with the responses given to the interview protocol questions. I conducted in-vivo coding of each audio recording by stopping and starting the recordings at each response point and applying a relevant developed code to such quotation. As an example, the best diabetes educational experience that a participant voiced as the diabetes class was coded “bestedexpclass” (Keenan, 2014). If a recording or transcript did not align with an existing code then I created a new code using ATLASti’s© “coding manager” function (Friese, 2014, p.95). A total of 86 codes were developed via the in-vivo auto coding process. The third step in descriptive coding was conducted to strengthen the analysis by identifying duplications or codes with similar meanings that could be grouped together in order to have meaningful and discrete, rather than discrepant codes. A total of 81 codes emerged from the coding process which required further analysis Additionally, the codes were visible alongside the recording/transcript in ATLASti© which facilitated the initial identification of categories and themes.

Conceptual analysis commenced with the review of all the codes assigned to the participants' data. In the process of descriptive coding, each code assigned to each participant was auto-tabulated to detail the number of times the code was selected. This tabulation is the first number visible after the code itself and such indicates the number of times the code was used. Such "groundedness" (Freise, 2014, p. 33) indicated how important and relevant the code was in the overall data. Conceptual analysis continued with the development of families in ATLASti©. Families are considered broad categories that were developed by utilizing ATLASti's© code manager, and dragging and dropping existing codes into an associated family grouping. These "families" each contained associated codes in order to facilitate relationships between the participant's race and culture for each interview question posed. The development of categories additionally facilitated ease of use of the 81 final codes.

Codes were initially developed in ATLASti© to align with the associated interview protocol questions. The codes were further expanded upon to include all the possible responses to the questions, and patient responses not previously identified as relevant to the associated research question. As an example the codes pertinent to the patients' preferences for color or black and white in educational material is aligned with the codes "c" for color, "bw" for black and white, and also "no preference". Initially the codes “c” and “bw” were developed in ATLASti©, however as a patient expressed “no preference” such was also added to the set of codes to ensure all responses were collected accurately.

Patterns and themes initially were apparent from the manual coding and entry of the participants’ data into ATLASti©. Emerging patterns were specific to the lack of a family member as a resource, the use of educational papers in the home, and the overwhelming preference to have material with color. *Families* (categories) were developed to include codes reflecting a grouping of responses to the interview questions. An example is the *family* labeled *easier to understand* which included the associated codes of: charts, pictures, video, words, no in person, and no reference. The remaining families developed based on repetition and frequency of occurrence were: take home instructions, race and culture, support members, prior education, preferred method for new learning, frequency of material review, education in the home, and difficulty in understanding. In addition to the development of families for ease of analysis, the quotations (codes) within each transcript/audio file were retrieved by querying the specific family. With the example of the first quotation within the family of take home instructions, such includes the codes of home papers (yes), home papers (no), and home books. The depiction below shows the electronic output of a quotation by the first (01) female (f) of Hispanic race (h) on July 7, 2014 at 59 seconds into the interview which lasted a total of 17 minutes and 56 seconds.

P 2: 01_f_h_2014_July_7 - 2:3 [01_f_h_2014_July_7] (0:00:59.39 [0:00:17.56])

The five non-African American/Black races' data was compared to the data retrieved from the African American participants. There were no discrepant cases identified throughout the study. One participant however had difficulty answering the race or culture question and I revisited such at the end of the interview and received a response. Two other participants answered the race and culture question in alignment with their personal religious and social like for other races or cultures which were interesting findings that through such rich descriptions gave credibility to my study. However after expanding further upon the question, both parties answered with a race of their association. Only one participant could not answer but indicated she was European and such was coded White which was in alignment and validated by her appearance.

Evidence of Trustworthiness

Credibility

Qualitative inquiry is reliant upon the credibility of researcher, the rigor of the methodology and the awareness of researcher potential bias (Patton, 2002). As an experienced nurse in the field of disease management, I recognized that my analysis could be influenced by my professional bias. However, I disclosed that I am a healthcare professional with approval from Walden University, my workplace IRB, and also the Harris Health System Clinic Patient Council at Large. Combining such disclosures with the discussions held, gave credibility to the study, to me personally as the researcher and professional, and also projected how valuable this qualitative research study could be. Manual and electronic analysis was repeatedly evaluated and reviewed for patterns, categories, and themes, to optimize each element of data retrieved. My results include the reporting of unexpected findings and the discussion of new explanations sought to support the dissimilar past knowledge and the new knowledge obtained. Data pertinent to contrary findings are included in the results, and their unusual and somewhat thought provoking nuances pertinent to the undeserved population in the study, are reflected upon in a pragmatic and scholarly manner.

Utilization of the same interview protocol for all participants, and the simultaneous audio recording of such, facilitated the accurate collection of data. The audio recordings were repeatedly reviewed for accuracy in transcription and also audibility following the download of the data collected into the ATLASti© software. Prior to, and during analysis, each of the interview protocol documents and their associated marginal notes were cross checked against the associated audio recording. In this manner I ensured the data collected manually was accurate when compared with the audio recording. I cross checked the alpha-numeric code assigned to each participant between the interview protocol and the verbal notation I recorded at the end of each interview to ensure accuracy in correlation of the demographics of the population sampled.

The documentation of noticeable participant’s pauses and the hesitancies with which some participants responded to the questions, were captured as a manual notation. This data was then cross checked with the associated audio recording to evaluate the value, meaningfulness, and ultimate inclusion of such in the study’s findings. Such findings enabled me to gather, analyze, and document the rich and thick descriptions given by each participant, providing rigor to the qualitative ethnographic approach of this study. I secured a doctoral prepared colleague experienced in qualitative research to conduct reflexive triangulation (Patton, 2002). I met with the colleague securing documented approval to keep all research data confidential. My colleague reviewed the interview protocol documents, evaluated that there was no link to patient identifiers, and that notations on the document were present. The alpha-numeric code was evaluated for existence and use on the interview protocols and the audio recordings. The data collected was reviewed on the interview protocol and also samples of the audio recordings downloaded into the ATLASti © software were heard. This debriefing of the data collected gave credibility to the ultimate analysis and for the feasible potential professional use following presentations of the study's findings.

Transferability

The purposeful sample size of 30 of which 18 were African Americans, cannot be generalized to a larger size population or be deemed applicable to a different phenomenological group. The data retrieved can only be applied to the same ambulatory settings and the same adult age group. The data retrieved through this qualitative methodology and ethnographic approach yielded rich, thick descriptive detail. In accordance with Patton's "Principe of Discriminant Validity" (Patton, 2002, p. 581) this data can be applied as relevant and useful to the African American of either sex, whom are 18 years of age or older, and have a diagnosis of diabetes. The study's population focus (African American) with diabetes as the phenomenon, can be generalized to a race similar population, and to the same ambulatory clinic setting and the same standardized educational material (Patton, 2002).

Dependability and Confirmability

Two audits were conducted to promote dependability and confirmability of the study's findings. A colleague with a PhD experienced in qualitative data collection and analysis (not a direct report or in the same department) following a previously signed agreement, reviewed and evaluated the instrument to assess for the ability to secure the data required to answer the research questions. The colleague reviewed the questions for ease of understanding and the ability to align with specific research questions prior to the commencement of data collection. A second audit post data collection was conducted by a different colleague with a PhD to evaluate the method of data collection, the analysis process, and gave dependability to the ultimate findings. Audit of the data and analysis is further reviewed by the URR to ensure the research is of high quality.

Results

Results were readily available after the input of the participant's data into ATLAS.ti© in the formats of text, table and memo. Challenges were related to my use of the new software ATLASti©, chart development and subsequent reporting of data. The families were developed as a means of grouping specific participants' responses to answer the research questions. There were no discrepancies noted, however, one participant had difficulty answering the race and culture question but voiced being of European ethnicity European race which correlated with the physical appearance. The code of *CNA* to indicate cannot answer was included in the family of race and culture so as to include all of the data retrieved in the analysis.

RQ1. Do African Americans, compared to other races and ethnicities, find diabetes easier to understand if the material is delivered and discussed at the time of the group session, or given after the group session as a take-home brochure?

RQ1 was answered from the participants' responses given to interview questions 2a and 2b. African Americans responded 100% to using paper material in the home, just slightly higher than the other races at 92%, with one participant also having video education in the home.

> Papers…yes, and she give us some and I was happy about that
>
> read it …uum….so I would say every couple of weeks

Additionally and surprisingly, 6% of African Americans voiced their use of books and brochures in the home. Pertinent to how often the in-home education material is used, 33% of African Americans utilized the educational resources daily, compared to the other races with only 8% use by the Hispanic/Latino race.

> I read it all the time when I first get it…

Additionally, African Americans' referred to their material twice weekly 28% of the time compared to the highest percentage of use being twice weekly by the Hispanic participants.

RQ2. What do African Americans identify as barriers to understanding the standardized diabetes health education material utilized, as compared to other races or ethnicities?

RQ2 was answered by the interview questions numbers 1, 6, and 7 posed to the participants. Findings from these questions is of great importance when the responses are linked together to provide an overall picture of the participants' difficulties in self-management of diabetes. African Americans exceed the other races with 33% using educational material daily or twice weekly being selected 28% of the time. Of relevance is that 39% of the African Americans voiced diabetes classes being the best educational experience, 22% selected the clinic patient educator. Of this 22% the participants knew the patient educator by name.

> Teacher explains things very well….she can tell you about food, how much……
>
> Uuum, well the showing….and the therapist, and her speaking…the teaching and her experiences.
>
> If someone is standing their instructing and doing a good job… then you know…
>
> Well I believe these classes I am taking… have been the best I've had…

Twenty eight percent of the African Americans indicated sharing was the best valuable experience. Only 17% (highest percentage) of the other races indicated sharing was the best educational experience.

> Sitting in class, understand more what is wrong with me… and you have others there with the same problem……..

Only one participant from each of the Hispanic, White, Asian, American Indian and the European responders, voiced the best educational experience was education regarding food, sharing, exercise, classes, and how diabetes affects the body via the methods of video, class, sharing, and books.

> Uum….been to my first class...get how much …my family all has it now.. learn about the liver and the pancreas…..

When combined with the responses to question 7, African Americans at 50 % voiced difficulty in understanding diabetes related to carbohydrates and sugars compared to the other races combined of 66%. Additionally, 12% of African Americans voiced specific difficulty with understanding the glucose range and food choices overall, compared to 8% of the other races. Of interest is that African Americans dissimilar to the other races indicated that being overwhelmed, the inability to listen, and the use of long words (all scored 6%) were barriers to understanding their diabetes. Depression accounted for 8% of the other races and no African Americans voiced such reason for difficulty in understanding educational material.

> Yeah…you know….the different carbs and different sugar content… sometimes it's hard to understand and you don't know what exactly you're supposed to be eating.

In answering the best way to understand and learn something new 72% of African Americans believed hearing the information was optimal, compared to other races at 42%. African Americans preferred to watch a task being performed 33% of the time, which was incongruent with other races (58%) desire to observe the task. Actually seeing the information (such as books, papers) scored 56% for the African American race and 33% for other races. Five African Americans (28%) preferred all three methods compared to 25% of the other races, with 2 participants of the other races voicing preference for seeing and hearing combined, and one voicing a combination of observation and seeing information.

> I like watching someone……..helps me remember…..

RQ3. What type of material is more useful to the African American patient compared to other races and ethnicities in self-management of their diabetes: material containing pictures, graphs, tables, Likert scales, only text, or some other form of visual aid?

RQ3 was answered by the participants' responses to questions 1, 3, and 4 of the interview protocol. Preferences for comprehending diabetes education for the African Americans was a close combination of words, (33%) pictures, (39%) and charts (33%). The other races voiced 33% similarly for words, and 42% for pictures, charts, and a combination of all three. Prior educational information was rated as the highest of all races and detailed as 50% and 58% for African Americans and the other races respectively. A combination of video/papers, video/teacher, and video alone accounted for 17% of African Americans and 33% for all other races. One participant of the White race indicated a lack of prior education as diabetes was a new diagnosis, however papers were now received and valuable. Comparably 11% of African Americans and 8% of other races had not received diabetes education previously. Another non-African American voiced that a slower paced diabetes class was preferable as in the past, and one African American was not able to answer the question. When discerning the connection between the preferred method of learning something new and comprehension of such, the results indicate that African Americans considered hearing the information as the first preference, (72%) dissimilar to the other races that preferred hearing the information 42% of the time. All races were similar in their desire (African American 28% and 25% of other races) in their preferences for needing to see, hear, and watch, new information being delivered.

RQ4. Do African American patients with diabetes, compared to other races and ethnicities, find the use of color in educational materials to be more useful in understanding the material than black and white?

RQ 4 was answered by the participants' responses to interview question 5. At 78% African Americans were slightly less congruent with their preference for colored educational material when compared to the other races combined at 83%. The choice of no preference between color and black and white, were identical for African Americans and other races at 17%. Only one African American selected black and white as a preference in educational material.

RQ5. What type of educational assistance material is used in the home by the African American patient (e.g., papers, brochures, videos, or audiotapes), and how does this compare to members of other races and ethnicities?

RQ5 was answered by the participants' responses to interview question number 10 resulting in similar percentages for the use of paper material in the home 50 % for African Americans and 58% for other races. The internet was reported being used 17% by other races and television at 22% but with no usage by the African Americans. Brochures at 17% were used exclusively by African Americans and with videos being used 11% but by comparison 25% in other races.

RQ6 – Do African American patients with diabetes share their health information with families, caregivers, and/or faith based community organizations, and how does this compare to other races and ethnicities?

RQ6 was answered by the responses given to questions numbers 8 and 9. Interestingly 89% of African Americans indicated that they would not seek a family member's assistance and 33% indicated no desire to use a church member, care giver, or family member, despite their genetic and voiced hereditary diabetes familiarity. Of note the quote below illustrates that unless a family member has diabetes help would not be deemed of value.

> no because there is no one in my family with diabetes.

Compared to the other races voicing a total of 75% reluctance to use as a family member as support and 41% caregiver or church member, African Americans sought the support of a caregiver 39% of the time and a church member 33% of the time.

> No ma'am, I do not talk to anyone, I keep it all inside.

> You know it is hard to explain to them….I do better in my group……like to share you know.

> Well they're just friends……

Additionally, of interest a sister and son, a sister, and a daughter were sought for assistance but were not responded to in the family category but rather as a caregiver.

> I share it with my sister ….she's had lots of trouble….leg amputated….

One participant utilized caregivers (sister and son) to administer insulin evidenced by the following quote.

> My sister or my son..yes…sometimes I have to drive to have my insulin put on.

Summary

The 6 research questions were answered by a selection of 10 interview questions posed to 30 participants, 18 of whom were African Americans and the study's focused demographic. Question one asked if the participants liked to have paper educational material to take home and how often such is referred to. Paper educational material is described as the documents that patients receive when attending a diabetes class. African Americans preferred in home paper educational material (100%) and 33% referred to the resources daily compared with 92% of other races preferring paper and 0% referring to such daily. African Americans referred to the material twice weekly (28%) compared to other races at 8%. African Americans at 6% were the only race to voice the additional use of books and brochures.

The second research question sought to answer how the participants learned a new topic, what the best educational experience had been, and what types of difficulty or barriers were encountered in understanding diabetes as a disease. African Americans, unlike the other races, referred to their material daily and twice weekly (33% and 28%) respectively. Compared to the other races African Americans scored higher in enjoying diabetes class participation (39%) and sharing in class (28%). Twenty two percent referred to the educational experience with the patient educators and specifically disclosed their names. African Americans had the greatest difficulty with understanding carbohydrates and sugars (50%), but lower than the other races at 66%. However, feelings of being overwhelmed, difficulty in listening, and being confused by lengthy terms were specific to the African Americans. Optimal learning via hearing information was the preferred method of the African Americans at 72%, yet visually watching a new task being performed was 33% less than the other races at 58%. In contrast seeing the information was preferred at 56% compared to other races at 33%.

Research question 3 was answered with African Americans equally preferring words, pictures, and charts at a similar percentage to other races, and African Americans were somewhat similar in their score of 50% having received prior education as had other participants of other races at 58%. The preference of having colored educational material was preferred by African Americans at 78% somewhat lower than the other races at 83%, however 17% equally across all races voiced there was no preference, and only one African American indicated that black and white was preferred. Hence research question 4 overwhelmingly was answered with the preference of material to be colored.

Research question 5 was answered with the use of paper material being used in the home by African Americans at 50% compared to other races at 58%. Interestingly there was no usage by African Americans of television or the internet. Only the African Americans voiced use of brochures but the other races utilized videos (25%) of the time versus 11% by African Americans. Lastly, research question 6 was answered surprisingly with an overwhelming 89% of African Americans indicating that family members would not be sought for help but caregivers would be utilized at 39% as would church members 33% of the time.

Chapter 5 will reiterate the purpose of the study and provide a summary of the findings. Comparisons between the literature researched and the study’s findings will be discussed and the findings will be interpreted referencing Bandura’s (Bandura, 1997) self-efficacy theoretical framework for this study. The study’s limitations will be detailed, and recommendations with implications for positive social change will be explored.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This qualitative study was directly inspired by the Affordable Care Act of 2009 and its mandate to improve health and lower the overall cost of healthcare in the United States. The ethnographic approach of this study specifically sought to identify the elements of diabetes educational material that African Americans find most useful in self-management of their disease. The design was intended to improve understanding of how African American race and culture alter the perception and use of diabetes education material, with the overall goal of promoting improvements that will facilitate an overall decrease in the cost and risk of complications in this genetically predisposed population. This disease impacts 30% of Houston’s population and led to 31.9 hospitalizations per 10,000 African Americans in 2010 (Centers for Disease Control, 2013; Texas Department of State Health Services, 2013).

The study identified several strong trends in this population’s disease education preferences. Key findings included that 100% of the African Americans interviewed prefer take-home paper instructions, and that 33% of them refer to these materials daily. Thirty nine percent prefer a classroom setting in which to share their experiences. Seventy-two percent of the African Americans interviewed stated that they preferred to hear educational information, compared to 33% of respondents from other races. Notably, fifty-eight percent of the African American participants expressed a desire to visualize the new task, compared to just 33% in the other races. There was no significant difference between any of the races pertinent to specific inclusion of words, pictures, or charts in educational material, but a slight difference in the preference of color being 78% for the African Americans and 83% for other races. African Americans compared to the other races voiced no usage of the internet or television and only 11% compared to other races at 25% utilized videos as a method of learning. Interestingly, 89% of African Americans indicated that they would not seek out a family member for assistance, but 39% indicated that they would seek out a caregiver and 33% indicated that they would seek out a church member for this same assistance. African Americans expressed less difficulty in understanding the role of carbohydrates in diabetes (50%) than the other races (66%). The difficulties voiced specifically by the African Americans were exclusively related to listening, language, lengthy medical terms, and being overwhelmed.

Interpretation of the Findings

Faith

This study’s finding that 33% of the African American participants indicated that they would seek a church member’s support over a family member, aligned with the CDC’s (2010) findings that health communication is enhanced when delivered by a faith member of the community. My interview questions did not seek to evaluate the presence of spirituality or faith, however; therefore my findings cannot confirm or disconfirm the conclusions of Grace (2011) and Rovener et. al., (2013) that presence of faith is linked to positive self-care behaviors. Additionally, my study did not produce any findings of a diabetes/disease and spiritual belief correlation such as those detailed by Grace (2011). This study does, however, confirm the findings of Wexler, Elton, Pleister, and Feldman (2009) and Rovener et al, (2013) describing a *fait accompli* mentality towards the genetic factor of diabetes amongst African Americans. Some examples of this were comments I received related to such occurrence regardless of education indicating it would be “just a matter of time” (C.R. personal communication, July 24, 2014) until diabetes was diagnosed in an individual.

Self-efficacy

This study confirmed several earlier findings related to patient self-efficacy. It confirmed Shillinger & Keller’s (2012) findings that it is necessary to pay attention to the content of patient’s diabetes educational material, as evidenced by my study’s population expressed desire for including color, pictures, words, and charts to facilitate their learning. Gumbs (2012) and Shacter et al. (2009) detailed African American participants’ inability to control blood glucose in spite of education. This aligned with my findings of African American participants voicing difficulty in understanding information about carbohydrates, regardless of their education. However, this finding is not exclusive to African Americans, as this difficulty was also voiced by participants of other races. However, unlike other races, my study’s population did express a general difficulty in retaining the information, as evidenced by a need to frequently refer to educational material.

My study confirmed and extended the knowledge regarding the need for the amendment of standardized educational material to be pertinent to the race and culture of the audience. My findings included the feeling of being overwhelmed and the need to refer frequently to material to assist in retention of content. Such findings also confirm Funnell et al. (2011) information that standardized material is not at such a health literacy level to be beneficial to all patients with diabetes. Of significance is the need to tailor educational material to be culturally sensitive, accessible to the recipient, at an appropriate health-literacy level, and in a format that facilitates repeated reference.

Sex

This study found some significant gender-related related results. Although this study's sample size included only 12 African American women participants in my study, the results strongly disagreed with the conclusions of Murrock, Taylor, & Marino (2013) that women face greater challenges than men as far as needing support, guidance, and being more readily confused by information. However, my findings of difficulty in understanding carbohydrate elements of diabetes could be aligned and hence confirm the dietary adherence challenge documented by Murrick, Taylor, & Marino (2013). Similarly, my findings indicated that currently available educational materials at the studied clinics are not optimal for use by African Americans with diabetes. Race concordance was not an element of study in my research, but I recommend a study having a patient-led race concordant support group, to ascertain if self-care is optimized in everyday activities.

Trust

While Wexler, Elton, Pleister, & Feldman's (2009) discovered that there remains mistrust between African Americans and physicians, my study's participants yielded no mention of physicians and mistrust that could confirm or disconfirm this past finding. Unlike Peek's (2012) finding that African American males were mistrustful of physicians, none of the six African American males participating in my study voiced concerns about their physicians. Additionally, there were plentiful discussions about the positive expertise of the patient educator who was frequently referred to by name. Participants also often referred to the class as their best diabetes educational experience. I can confirm from these findings that trust in a nurse-patient relationship is necessary for the motivation to learn. Such motivation is evident by voluntary attendance at the diabetes class, which is viewed as an environment for retention of learning.

Culture

I requested that my study participants self-disclose their association with a race or culture prior to answering the interview questions. That data was used to align responses with a particular race or culture. Those identifying as African Americans related experiences of anxiety about the disease, and decreased attention similar to Davis et al., (2011) findings of same signifying a lack of self-agency and resulting self-efficacy. Dissimilar however, were my findings of the participants' ability and desire to seek care and education, witnessed by their attendance at voluntary diabetes classes, and willingness to ask questions in a classroom forum. These findings have the potential with further research, to confirm that self-perception of independence is indicative of a higher self-agency. None of my findings confirm or disconfirm Blair's et al.' (2013) and Snipes et al., (2011) conclusions that clinician bias results in patient's compromised understanding of health education.

Theoretical Framework

Bandura's (1997) self-efficacy theory framed this study pertinent to the tenets of attention, retention, motivation and motor production. Such are elements in observational learning, which was the forum (diabetes class) for the participants in my study and therefore exceedingly relevant. With diabetes being a disease that responds well to modification of risk factors via self-care, it is pertinent that I sought the participants' preferences for diabetes educational material. As detailed in Bandura's (1997) theory of self-efficacy, observation did not correlate to comprehension. Confirmation of such is evidenced in my study by African Americans who repeatedly voiced their attendance at many diabetes classes, regardless of the curriculum. In essence, regardless of the number of years a patient had been diagnosed and managing their diabetes, all classes were deemed valuable.

Attention is related to cognition and is necessary for learning to take place (Bandura, 1977). The daily and frequent percentage of material review by my African American participants (33% versus 28% other races) validates that attention is difficult. This finding could be linked to the African Americans' increased motivation to attend classes and repeat learning. Such practice may facilitate the further retention of information to self-manage disease. My findings clearly delineate that African Americans like take-home educational material and refer to such frequently, and some even daily. This need to refer to material could be evidence of Bandura's (1997) assertion that there needs to be a belief and a personal reminder of the personal ability to learn. Similarly, there is the potential to align the need for frequent referral to a personal lack of comprehension (retention) which according to Bandura (1997) is essential for a change in behaviors. While standardized material disseminated at each diabetes class cannot be assumed to be comprehended, the trustful (and voiced) positive communication between the named educators and the study's African American participants can be aligned with Bandura's (1997) tenets of attention and retention leading to motivation and potential for healthy behaviors (production).

Limitations of the Study

Limitations of this study were related to the interview location, the health-literacy and literacy levels of the participant, period of time that a participant had been diagnosed with diabetes, the interview protocol, and researcher bias. The participants' selection of a telephonic interview created an unknown interview location, albeit such was often the participant's home. As a result the participant could have been distracted and hence full attention and diligence may not have been applied in delivery of the data. However, prior to the beginning of the telephonic interview I asked the participant if the time and comfort was optimal. This was beneficial in securing an optimal location (telephonic) as five participants requested that I call back at another specified time and day. However, a limitation (weakness) remains due to the inability for me to have visually witnessed non-verbal behaviors.

The study criteria for participation did not delineate between a participant's diagnosis of type 1 or type 2, nor considered or restricted the length of time the participant has been diagnosed with diabetes. As a result some participants (based on information relayed to me) had more experience in self-managing their diabetes. This factor may have skewed the data collected. Therefore the findings could not be extrapolated to pertain to either newly diagnosed or patients' experiences with many years of diabetes.

Awareness of disease management and patient education programs could have resulted in my bias towards the data collected as part of this study. To mitigate such and facilitate optimal credibility, I discussed my role and past experiences with the participants, and I had a clinic colleague known to the patients, introduce me to the prospective participants. Additionally, I had not participated as a nurse educator in any of the clinics attended. The participants' voluntary attendance at the diabetes classes could be viewed as a greater than optimal motivation to learn. As a result, the data collected may be considered of a higher caliber and less representative of Houston's overall population with diabetes. Weaknesses inherent with a self-developed interview tool might have restricted the data collected, and hence not comprehensively answered the research questions. However, I secured a colleague experienced in qualitative research, to review my interview protocol for the ability to retrieve valuable data, and to also assure there were no racial or cultural disparities or offensive questions to be posed. Lastly, validity and credibility were optimal by my tape recording of the interviews facilitating accuracy in transcription, and the secure storage of all data, tapes, memos, and marginal notes. There was the potential for retrieval of data to be limited, given that I was not able to have eye contact with the participant to further develop engagement and rapport. Another limitation would be the ages and sexes of the population studied and that generalization and transferability could be assigned to only adults (not pediatric or geriatric populations) of male and female sex, despite there were only 8 males who participated in the study.

Recommendations

Study participants were male and female, but this study did not compare data between the sexes, of which females comprised almost two thirds of the purposeful sample population. Additionally, future research would be beneficial to study the inclusion of women’s specific life barriers pertinent to self-management compared to those of males with diabetes (Gumbs, 2012).

The interviews conducted in this study revealed valuable individual data, which could be enhanced by conducting a focused patient group review of diabetes standardized educational material. As the data strongly resulted in the African Americans’ preferences for sharing and attendance at group diabetes classes, further research would be valuable to determine if the capacity to self-manage diabetes is enhanced as a result of group sharing, versus a diabetes class with a structured curriculum.

African American males according to Treadwell et al. (2010) lacked trust in the physicians and medical community. It was noticed that attendance to the diabetes classes in my study comprised of one third males and similarly, 6 of the 18 African American participants were males. I assert additional research specific to the African American male, pertinent to the preferred venue for learning would be advantageous. As my sample size was small, further research with a larger sample size would be beneficial in exploring further my study's surprising results, that family members would not be sought for assistance (89%). Lastly, further research is necessary to see if there is a correlation between the African American culture and their effects on health literacy, when utilizing only standardized material. Such findings could further expand upon desire to learn the effects of culture and language on health literacy (Shaw et al., 2009).

Implications for Positive Social Change

Individual

The findings voiced by individual and collective African Americans in this study positively impact the individual. There are sufficient specific nuances to potentially assist in enhancing diabetes education for the individual African American. Findings pertinent to the use of color, pictures, and words in take home paper instructions reveal such aid in paying attention to the material. It would be pertinent for the clinician to suggest that the African American with diabetes may learn new information more readily by hearing the information. It could be expressed that retention of the educational material can be improved when combined with at least twice weekly referral to such in the home. Sharing tips for everyday life in a group setting may be a good source of support for living with diabetes. Caregivers in the home and church members are also good sources of personal support. The African American individual with diabetes should be aware that s/he is not alone in having difficulty in comprehending the elements of carbohydrates in the diet. There may be additional difficulty in listening to information and there could be feelings of being overwhelmed. It is imperative given the study's findings to acknowledge that even with English spoken as the first language such must be tailored to the individual health literacy level. The individual needs to be educated to ask questions, and realize that take home materials are better understood when referred to several times weekly, regardless of how long it has been since diabetes was diagnosed.

Family

While this study's findings were negative for seeking the support of family members, specific members of a family unit such as sister, son, and daughter were named. I assert that family members may have been perceived as those not living with the individual, but rather those who are on the patient's periphery. This study found that African American's desire to share information as a method for learning. Positive self-management outcomes could arise from the future inclusion of family members and caregivers in a classroom setting.

Organizational

Healthcare organizations can potentially utilize the new knowledge from my study in relation to diabetes program and educational development, to enhance patient self-management of disease and lower healthcare costs in accordance with the Affordable Care Act (DPC, 2009). Healthcare resources will become more finite as healthcare transformation and reimbursement for services becomes aligned with quality outcomes (DPC, 2009). While clinicians facilitate diabetes classes and groups, and as African Americans prefer to share in a group, patients potentially could be selected as informal, yet valuable leaders of support groups. The utilization of costly clinicians could then be saved as a resource and to deliver only the didactic portion of education. In this manner, daily living tips under guidance would be shared amongst like patients. Presentations should be a combination of audible content accompanied by visual learning, rather than practice sessions. Given the study's findings that even with appropriate level of literacy, instructions should be in color and include a selection of pictures, charts and words in order to facilitate a patient's optimal attention.

As African Americans voiced their desire to review take home materials frequently, an organization could produce material for review at the patient's convenience via the use of a cellular application. In this manner replication of such would be cost effective, and access to the information could be given at discharge from the clinic visit, class session, or hospital. Utilization of an application would fulfill the need for the African American to hear and see the information, yet also be readily available for reference. Additionally, loss of the material would be minimized.

Societal/policy Impact

The Alliance to Reduce Disparities in Diabetes (2012) and the Institute of Medicine (2012) promote and petition for changes in health policy to move forward the acknowledgement that diabetes is a national and growing disease. Health policy detailed in The Affordable Care Act (DPC, 2009) will require society to assess their specific population served in order to facilitate the management of diabetes, and the promotion of health (decrease in new disease and resulting complications). My study's findings are aligned with the acquisition of new knowledge in the discovery that African Americans (albeit a small sample size) are specific in their diabetes educational needs. Societies like organizations have finite financial resources and human capital with which to promote health and treat disease; hence we must include the patient in such a grand endeavor.

Understanding that African Americans have preferences related to new learning (hearing the information), reinforcement of such learning (difficulty in attention, yet frequent reading) and the desire to access care to manage their diabetes (shared classroom learning) is crucial for the enactment of potential new health policy. Such policy may mandate an every other year social assessment of the population served. This assessment could initially identify the demographics pertinent not to each county, but to each healthcare organization. Relevant to Houston and even more specific to Harris Health

System, the findings from my study could potentially alter the educational methodologies and strategies to deliver diabetes education to the African American population. Such findings could be a step forward in understanding that accessing care is not correlated to the receipt of useful, educational diabetes information. The potential to provide outreach for the African American population and deliver care in the preferred setting via the preferred method, has positive implications for the achievement of effective diabetes self-management. The potential to have patients successfully self-manage their diabetes could result in local, regional, and national positive health outcomes with a subsequent decrease in healthcare utilization and cost.

Theoretical and Empirical Implications

My study's findings build upon the tenets of Bandura's (1997) theory of self-efficacy. The empirical findings possess potential future implications for the development of useful diabetes education material for African American Houstonians. My findings that African Americans have difficulty in attention could be aligned with Bandura's tenet of attention being necessary for self-efficacy. This lack of self-efficacy is evidenced by Houston's African American greater than national average, readmission rate for diabetes (Texas Department of State Health Services, 2013). A deficit in the element of retention (Bandura, 1997) has the potential to be associated with the African Americans' need to frequently review educational material and desire repeat attendance at group educational classes. This study's population genetic predisposition to diabetes surprisingly voiced recognition that because family members had been diagnosed that the patients' fate was inevitable. This information may be linked to a potential lack of motivation and production detailed as “fait accompli” (Bandura, 1997). This concept should be taken seriously when educating African Americans about health, wellness, and diabetes. Fostering individual empowerment is essential in denoting that a personal difference in the promotion of health and effective self-management of diabetes can be achieved.

Recommendations for Practice

As a result of my findings, health care clinicians must be aware that cultural nuances exist that may negatively impact an African American’s ability to optimally self-manage their diabetes. Based on my findings I would recommend that all educational material be in color and include pictures, words, and charts. I suggest that caregivers of the African Americans with diabetes be invited to the diabetes group classes to aid in the support (and the voiced need) for reinforcement by repeated review of the material. Additionally, I recommend the amendment to the existing diabetes group class curriculum and in the future to include take-home audio tapes, specifically with a focus on carbohydrates relayed in layman’s terms.

Another recommendation would be for each entity delivering care within Harris Health System to evaluate their population of African Americans with diabetes, and monitor their healthcare utilization. This would be necessary to establish if such is related to diabetes and any deficits detailed as preferred by my study’s focused population.

Resulting interventions as appropriate could then be monitored for a potential link to a hopeful decrease in healthcare utilization and cost.

Conclusions

Healthcare transformation is progressing to achieve the Affordable Care Act's goals of improving access to care, improving the quality of care, and lowering the cost of healthcare (DPC, 2009). This requires patient empowerment to self-manage their disease and decrease costly healthcare utilization. However, healthcare professionals must develop, implement, and utilize the preferred methods for learning, to effectively engage patients in health and wellness activities that will manage chronic illness, and promote individual and population health.

African American Houstonian's (30% of Harris County) access healthcare, yet incur a greater than national average of readmissions to acute care (Texas Department of State Health Services. (2013). My study explored what elements of diabetes educational material for this genetically predisposed population at risk, was useful, understood, and would be potentially effective in patient's self-management of diabetes. Results revealed there is indeed a difference between African Americans and other races of:

- the preferred learning method.
- take home instructions.
- support assistance sought.
- the necessity to frequently refer to educational material.

African Americans voiced difficulties with inattention and the subsequent need to refer to take home instructions. These instructions may or may not be aligned with the study's findings of the need for color, the inclusion of charts, pictures, and words. A class setting with patient educators as instructors is the preferred educational methodology. Additionally, African Americans find value in sharing with other patients in a group forum. This study's findings from a small sample size, are still relevant in facilitating compliance with health policy within the Affordable care Act's request for the production and use of culturally sensitive patient education material (CDC's, 2013; DPC, 2009). Such findings are pertinent to the study's African American population within Harris County Texas, in the hope of further understanding how future policy can be developed to aid the African Americans in self-management of their diabetes. Empowering patients to self-manage their diabetes will facilitate improvement in health and decrease the cost of healthcare for this chronic disease.

References

Agency for Healthcare Research and Quality. (n.d.). Quality improvement interventions to address health disparities. Closing the quality gap: Revisiting the state of the science. Retrieved from http://www.effectivehealthcare.ahrq.gov/ehc/products/386/1242/EvidReport208_CQGHealthDisparitiesFinal Report_20120824.pdf

Alliance to Reduce Disparities in Diabetes. (2011). Enhance diabetes self-management supports. Retrieved from http://ardd.sph.umich.edu/160.html

Alliance to Reduce Disparities in Diabetes. (2012). Policy considerations that make the link connecting community experience and national policy to reduce disparities in diabetes. Retrieved from http://ardd.sph.umich.edu/assets/files/Alliance%20to%20Reduce%20Disparities%20in%20Diabetes%20Policy%20Considerations.pdf

American Association of Diabetes Educators. (2011). Cultural sensitivity and diabetes education: American Association of Diabetes Educators (AADE) Position Statement. *The Diabetes Educator*. Retrieved from http://www.diabeteseducatgor.org/export/sites/aade/resources/pdf/general/CulturalSensitivity_and_Diabetes_Education_PS_2011.pdf

Andrulis, D. P., Siddiqui, N. J., Purtle, J. P., Duchon, L. (2010). Patient Protection and Affordable Care Act of 2010: Advancing health equity for racially and ethnically diverse populations. Retrieved from http://www.jointcenter.org/hpi/sites/all/files/PatientProtection_PREP_0.pdf

Annesi, J. J., Unruh, J. L., Whitaker, A. C. (2007). Relations of changes in self-efficacy, exercise attendance, mood, and perceived and actual physical changes in obese women: Assessing treatment effects using tenets of self-efficacy theory. *Journal of Social, Behavioral, and Health Sciences, 1* (1), 72-85. doi:10.5590/JSBHS.2007.01.05

Badarudeen, S., Sabharwal, S. (2010). Assessing readability of patient education materials: Current role in orthopedics. *Clinical Orthopedics and Related Research*, *468*, 2572-2580. doi:10.10007/s11999-010-1380-y

Bandura, A. (1997). *Self –efficacy: The exercise of control*. New York: W.H. Freeman

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Barrow, S. L. (2010). Treating patients from diverse populations. *Access*.30-33. Retrieved from http://www.associationforum.org/files/lc/album/images/ircdocs/access_09102010.pdf

Bulger, J. B., Shubrrok, J. H., Snow, R. (2012). Racial disparities in African Americans with diabetes: Process and outcome mismatch. *American Journal of Managed Care*, *18*,(8) 407-413. Retrieved from http://www.ajmc.com/publications/issue/2012/2012-8-vol18-n8/Racial-Disparities-in-African-Americans-With-Diabetes-Process-and-Outcome-Mismatch

Cameron, K. A. Ross, E. L., Clayman, M. L., Bergeron, A.R., Federman, A.D., Bailey, S.

C., Davis.T.C., Wolf, M.S. (2010). Measuring patients' self-efficacy in understanding and using prescription medication. *Patient Education Counseling*, *80*,(3), 372-376. doi:10.1016/j.pec.2010.06.029

Cardozo, L. J., Steinberg, J., Cardozo, S., Veerana, V., Deol, B., Lepczyk, M. (2011). Implementing the chronic disease self-management model in vulnerable patient Populations: Bridging the chasm through telemedicine. Advances in Telemedicine: Technologies, Enabling Factors and Scenarios. Retrieved from http://www.intechopen.com/pdfs/14287/InTech_implementing_the_chronic_disease_self_management_model_in-vulnerable_patient_populations_bridging_the_chasm_through_telemedicine.pdf

Collins, M. M., Bradley, C. P., O'Sullivan, T., Perry, I. J. (2009). Self-care coping strategies in people with diabetes: A qualitative exploratory study. *BioMed Central Endocrine Disorders*, *9*,(6). doi:10.1186/1472-6823-9-6

Davis, B. H., Pope, C., Mason, P. R., Magwood, G., Jenkins, C. M. (2011). "It's a wild thing, waiting to get me": Stance analysis of African Americans with diabetes. *The Diabetes Educator, 37* (3), 409-418. doi:10.1177.0145721711404439

Dill, D., Gumpert, P. (2012). What is the heart of health care? Advocating for and defining the clinical relationship in patient-centered-care. *Journal of Participatory Medicine*, *4*.e4-e10. Retrieved from http://www.jopm.org/evidence/reviews/2012/04/25/what-is-the-heart-of-health-care-advocating-for-and-defining-the-clinical-relationship-in-patient-centered-care/

DPC. (2009). The Patient Protection and Affordable Care Act. Retrieved from http://dpc.senate.gov/healthreformbill/healthbill04.pdf

Friese, S. (2014). Qualitative Data Analysis with ATLAS.ti. (2nd ed.). Thousand Oaks, CA: Sage Publications Inc.

Funnell, M. M., Brown, T. L. Childs, B. P. et al. (2011). National standards for diabetes self-management education. *Diabetes Care*, *34*, (1), S89-S96. doi:10.2337/dc 11-S089

Grace, D. L.(2011). Overcoming barriers in treating African Americans. *Dos Against Diabetes.* Retrieved from http:www.cecity.com/aoa/healthwatch/jan_11/print3.pdf

Gumbs, J. M. (2012). Relationship between diabetes self-management education and self-care behaviors among African American women with type 2 diabetes. *Journal of Cultural Diversity*, *19*,(1), 18-20. Retrieved from http://ehis.ebscohost.com.ezp.waldenulibrary.org/ehost/detail?vid=3&sid=71cf6007-c691-4a88-9acd-c76d79a43d0%40sessionmgr104&hid=101&bdata=JnNjb3BlPXNpdGU%3d#db=sih&AN=74246805

Hall, I. J., Johnson-Turbes, C. A., Williams, K. N. (2010). The potential of black Radio to disseminate health messages and reduce disparities. *Preventing Chronic Disease: Public Health Research and Policy*, *7*, (4). Retrieved from http://www.cdc.gov/pcd/issues/2010/jul/09_0194.htm

Hawthorne, K., Robles, Y., Cannings-John, R., Edwards, A.G. (2008). Culturally appropriate health education for type 2 diabetes mellitus in ethnic minority groups. *Cochrane Database System Review*, *16*, (3). doi:10.1002/14651858.CD006424.pub2.

Hendricks, C. S., Hendricks, D. L.,Webb, S. J., Davis, J. B., Spencer-Morgan, B. (2013). Fostering self-efficacy as an ethical mandate in health promotion practice and research. *Online Journal of Health Ethics*, *2*, (1). Retrieved from http://aquila.usm.edu/ojhe/vol2/iss1/6

Hibbard, J. H., Greene, J., Tusler, M. (2009). Improving the outcomes of disease management by tailoring the care to the patient's level of activation. *The American Journal of Managed Care*, *15*, (6) 353-360. Retrieved from http//www.ajmc.com

Institute of Medicine. (2012). An integrated framework for assessing the value of community-based prevention. *National Academies Press.* Retrieved from http://www.iom.edu/reports/2012/An-Integrated-Framework-for-Assessing-the-Value-of-Community-Based-Prevention/Report-Brief.aspx?page=2

Kasikci, M. K. (2011). Using self-efficacy theory to educate a patient with chronic obstructive pulmonary disease: A case study of 1-year follow-up. *International Journal of Nursing Practice*, *17*, 1-8 doi:1111/j.1440.172X.2010.01898.x

Keenan, L. M. (2013). *Exploring how race and culture alter a patient's perception of health education: A prospectus*. Unpublished manuscript, Walden University

Keenan, L. M. (2014). *Exploring how race and culture alter a patient's perception of health education: A dissertation.* Unpublished manuscript, Walden University

Kressin, N. R., Raymond, K. L., Manze, M. (2008). Perceptions of race/ethnicity-based discrimination: A review of measures and evaluation of their usefulness for the health care setting. *Journal of Health Care for the Poor and Underserved*, *19,*(3) 697-730 doi:10.1353/hpu.0.0041.

Kretchmar, J. (2008). Social learning theory. Research Starters Education. Retrieved fromhttp://ehis.ebscohost.com.ezp.waldenulibrary.org/ehost/detail?sid-c6081694-997e-4cf0-aa6...

Madden, M. H., Tomsik, P., Terchek, J. et al. (2011). Keys to successful diabetes self-management for uninsured patient social support, observational learning, and turning points: A safety net providers' strategic alliance study. *Journal of the National Medical Association, 103,* (3) 257-264

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach*. (3rd ed.). Thousand Oaks, CA: Sage Publications Inc.

McCleary-Jones, V. (2011). Health literacy and its association with diabetes knowledge, self-efficacy and disease self-management among African Americans with diabetes mellitus. *Journal of the Association of Black Nursing Faculty in Higher Education, Inc.*, *22* (2),25-32.

McDonald, M. V., Pezzin, L. E., Peng, T. R., Feldman, P. H. (2009). Understanding the complexity of hypertensive African American home care patients: Challenges to intervention. *Ethnic Disparities*, *19* (2). Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3521616/

Mishali, M., Omer, H., Heymann, A. D. (2011). The importance of measuring self-efficacy in patients with diabetes. *Family Practice*, *28,* 82-87 doi: 10.1093/fampra/cmq086

Murrock, C. J, Taylor, E., Marino, D. (2013). Dietary challenges of managing type 2 diabetes in African-American women. *Women and Health, 53 173-184*. doi: 10.1080/03630242.2012.753979

National Institutes of Health. (2013). Health literacy: What is health literacy? Retrieved from http://nih.gov/clearcommunication/healthliteracy.htm

NMCD Health Education. (n.d.) The African American patient and diabetes. Retrieved from http://www.sfhp.org/files/PDF/healthed/African_Americans_and_Diabetes.pdf

Nunez, M. A., Yarandi, H., Nunez-Smith, M. (2012). Self-management among patients living with diabetes in the United States Virgin Islands. *Journal of Health Care for the Poor and Underserved, 22* (1), 271-283. doi:10.1353/hpu.2011.0024

Ockleford, E., Shaw, R. L., Willars, J., Dixon-Woods, M. (2008). Education and self-management for people newly diagnosed with type 2 diabetes: A qualitative study of patients' views. *Chronic Illness, 4* (28), 28-37. doi:10.1177/1742395397086673

Paniagua, C. T. Taylor, R. E. (2008). The cultural lens of genomics *The Online Journal of Issues in Nursing, 13*(1), doi :10.3912/OJIN.Vol13No01Man05

Patton, M. Q. (2002). *Qualitative research and evaluation methods*. (3rd ed.). Thousand

Peters, R.M., Templin, T.N. (2010). Theory of planned behavior, self-care motivation, and blood pressure care. *Research and Theory of Nursing Practice: An International Journal, 24 (*3), 172-186. doi: 10.1891/1541-6577.24.3.172

Oaks, CA: Sage Publications Inc. Peters, R., M. Templin, T., N. (2010). Theory of planned behavior, self-care motivation,

and blood pressure self-care. *Research and Theory for Nursing Practice: An International Journal, 24* (3), doi:10.189/1541-6577.24.3.172

Rahim-Williams, B. (2011). Beliefs, behaviors, and modifications of type 2 diabetes self-management among African American women. *Journal of the National Medical Association, 103* (3), 203-215.

Rooks, R. N., Wiltshire, J. C., Elder, K., BeLue, R., Gary, L. C. (2012). Health information seeking and use outside of the medical encounter: Is it associated with race and ethnicity? *Social Science and Medicine, 74*, 176-184 doi: 10.1016/jsocscimed.2011.09.040

Samuel-Hodge, C. D., Keyserling, T. C., Park, S., Johnston, L. F., Gizlice, Z., Bangdiwala, S. I. (2009). A randomized trial of a church-based diabetes self-management program for African Americans with type 2 diabetes. *Diabetes Educator, 35* (3), doi:10.1177/0145721709333270

Sarkar, U., Fisher, L., Schillinger, D. (2006). Is self-efficacy associated with diabetes self-management across race/ethnicity and health literacy? *Diabetes Care, 29* (4), 823-829. doi:10.2337/diacare.29.04.06.dc05-1615

Schillinger, D., Keller, D. (2012). The other side of the coin: Attributes of a health literate healthcare organization. Retrieved from http://www.iom.edu/Reports/2012/˜/media/Files/Activity%20Files/PublicHealth/HealthLiteracy/2011-NOV-16/Commissioned%20Paper.pdf

School of Public Health, Health Indicators Committee. (2009). The state of health in Houston/Harris County. Retrieved from https://sph.uth.edu/content/uploads/2011/12/The_Houston_State_of_Health_2009.pdf

Shacter, H. E., Shea, J. A., Akhabue, E., Sablani, N., Long, J. A. (2009). A qualitative evaluation of racial disparities in glucose control. *Ethnic Disparities,19* (2), 121-127.

Shavers, V. L., Fagan, P., Jones, D., Klein, W. M. P., Boyington, J., Moten, C., Rorie, E. (2012). The state of research on racial/ethnic discrimination in the receipt of healthcare. *American Journal of Public Health, 102* (5), 953-966. doi: 10.2.105/AJPH.2012.300773

Shaw, S. J., Huebner, C., Armin, J., Orzech, K, Vivian, J. (2009). The role of culture in health literacy and chronic disease screening and management. *Journal of Immigrant Minority Health, 11,460-467.* doi:10.1007/s10903-008-9135-5

Singleton, K., Krause, E. M. S. (2009). Understanding cultural and linguistic barriers to health literacy. *Online Journal of Issues in Nursing, 14,* (3). doi: 10.3912/OJIN.Vol14No03Man04

Snipes, S. A., Sellers, S. A., Tafawa, A. O., Cooper, L. A., Fields, J. C., Bonham, V. L. (2011). Is race medically relevant? A qualitative study of physicians' attitudes about the role of race in treatment decision-making. *BMC Health Service Research, 11* 183. Retrieved from http://www.biomedcentral.com/1472-6963/11/183

Steinhardt, M. A., Mamerow, M. M., Brown, S. A., Jolly, C. A. (2009). A resilience intervention in African American adults with type 2 diabetes: A pilot study of efficacy. *Diabetes Educator, 35* (2), doi:10.1177/0145721708329698

Stiles, E. (2011). Promoting health literacy in patients with diabetes. *Nursing Standard, 26* (8), 35-40. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011343913&site=nrc-live

Stuard, S. S., Blair, J. A. (2011). Interval examination: Regional transformation of care delivery in the Hudson Valley. *Journal of General Internal Medicine, 26* (11) doi: 10.1007/s11606-011-1817-3

Tang, T. S., Funnell, M. M., Brown, M. B, Kurlander, J. E. (2010). Self-management support in "real world" settings: An empowerment-based intervention. *Patient Education Counseling, 79* (2),178-184. doi:10.1016/j.pec.2009.09.029

Texas Center for the Advancement of Literacy and Learning. (1995-2012). Percentage by county of illiterate Texans. Retrieved from http://www-tcall.tamu.edu/docs/09illitmap.html

Texas Department of State Health Services. (2013). The burden of diabetes in Texas. Retrieved from http://www.dshs.state.tx.us/diabetes/tdcdata.shtm

The Centers for Disease Control and Prevention. (n.d.). Chronic diseases and health promotion. Retrieved from http://www.cdc.gov/chronicdisease/overview/index.htm

The Centers for Disease Control and Prevention. (2009). What we know about: Health literacy. Retrieved from http://www/cdc.gov/healthmarketing/resources.htm

The Joint Commission (2010). Advancing effective communication, cultural competence, and patient-and family-centered care: A roadmap for hospitals. Retrieved from http://www.jointcommission.org/assets/1/6/aroadmapforhospitalsfinalversion727.pdf

Treadwell, H., Holden, K., Hubbard, R. et al. (2010). Addressing obesity and diabetes among African American men: Examination of a community-based model of prevention. *Journal of the National Medical Association, 102* (9), 794-802. doi:102.794-802

United States Department of Commerce. (2012). State and county quickfacts: Harris CountyTexas. Retrieved from http://quickfacts.census.gov/qfd/states/48/48201.html

Weekes, C. V. (2012). African Americans and health literacy: A systematic review. *The ABNF Journal*, *23* (4),76-80. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=20111746735&site=nrc-live

Wexler, R., Elton, T., Pleister, A., Feldman, D. (2009). Barriers to blood pressure control as reported by African American patients. *Journal of the National Medical Association, 101* (6), 597-603.

Appendix A: Interview Protocol and Data Collection Tool

Time of interview:

Date of interview:

Location of interview:

Interviewer name: Linda M Keenan

Interviewee ID:

Introduction of researcher:

Explanation of the project:

Invitational Questions

1. Good morning/afternoon, welcome, is this still a good time for you to answer my questions which will take approximately 45 minutes?

2. Do you have any questions regarding the use, storage, and/or reason for the research and information collected during our discussion?

3. Are you comfortable, if so then we will begin? Thank you.

Self-disclosure question

Of the following choices of race or culture, which one is most suited to you personally?

a) White

b) African American, Black

c) Hispanic or Latino

d) American Indian and Alaskan Native

e) Asian

f) Native Hawaiian or Other Pacific Islander

g) Some Other race

Interview Questions

1. When you recently needed to learn something new, were you able to understand better by: a) hearing the information, b) seeing (visualize) the information, or c) watching a person perform the new task?

Response:

2.

a) Do you like to have instructions on paper to take home with you to help you with your diabetes?

b) If you like take home instructions, how often do you read them to help you with your diabetes?

Response:

3. When you have been given diabetes education and information before, can you tell me what it looked like?

Response:

4. Do you understand diabetes education better when pictures, video, words, or charts are included?

Response:

5. Is educational information easier to understand if it is in color or black and white?

Response:

6. Can you describe to me the best educational experience you have had to help you with your diabetes, and what made it the best for you?

Response:

7. Is there a time when you had difficulty understanding any educational material, and what?

Response:

8. If you have difficulty understanding diabetes education do you seek a family member's help?

Response:

9. Do you find it useful to share your diabetes information with a family member, a caregiver or a church member?

Response:

10. What type of education method do you use in your home: 1) video, 2) audio/tapes, 3) books, 4) papers or brochures 5) radio?

11. Is there anything else you wish to share with me today and do you have any questions?

Response:

Thank you for assisting me in my research. If you have any questions after this interview please call 713-566-2513 for assistance.

Appendix B: Telephone Awareness Script

Exploring How African American Race and Culture Alter a Patient's Perception of Diabetes Health Education

Telephone Script (First Session)

Notification of Telephonic Recording

Good morning/afternoon/evening

PI: My name is Linda Keenan, for purposes of confidentiality may I ask for your code please that I gave you in our last phone conversation.

Participant Response……….

PI: Thank you

PI: After establishing identity……… I am the person at the clinic that spoke with you about my research. Is this still a good time for us to talk?

Participant response…………. **If yes** ………

> **PI**: Before we begin I wish to remind you that our telephone conversation and your answers will be recorded. If this is acceptable and you are comfortable we will begin (commence use of interview protocol).

Participant response………… **If no**………..

> **PI: I understand, is there a better time for you when we may talk? If not or decline /change of mind to participate is voiced then the proposed participant's code, name, and all identifiers will be removed from the study information given at time of recruitment and the initial telephone call.**

PI: (Progress though interview protocol)

PI: I really wish to thank you for assisting me in my research, and I look forward to our next call/in person to discuss your answers (repeat date and time agreed upon). Do you have any questions at this time?

Participant response………………

PI: Answer any questions posed.

Thank you again and I will speak to you soon.

Appendix C: IRB Project Closure Form

PROJECT CLOSURE FORM
HCHD INSTITUTIONAL REVIEW BOARD
(PLEASE TYPE)

INSTRUCTIONS: Complete this form when an approved human subject research project is completed or ends for any reason. Once a Project Closure Form is submitted, no more data may be collected about any of the subjects in the study. Therefore, if you are still collecting follow-up data (either directly from subjects or indirectly from existing records) about subjects, the project should remain open, even if you are no longer enrolling new subjects.

Reason for Project Closure:

☐ Final Closure of Project:

☐ Project Not Conducted or Cancelled:
Please describe:

☐ Project Director no longer at the Harris County Hospital District.
Location of signed informed Consent Documents – if applicable:

Original Approval Date: ______________________

Title: ____

Total Number of Subjects Enrolled at HCHD: __________________

Principal Investigator: ________________________ E-mail: ________________________

Department: ________________________ Phone: ________________________

PLEASE PROVIDE FINAL SUMMARY AND FINDINGS (250 WORDS OR LESS) ON PAGE 2 OF THIS FORM
Findings and Summary should be written in non-technical terms

____ ______________

Principal Investigator Signature Date

Reminder: The Principle Investigator is required by the Harris County Hospital District y and federal regulations to maintain records of all correspondence relating to the use of human subjects in research. Copies of the application forms, notices of approval, and signed informed consent documents must be maintained in the Investigator's records. Copies of these research records must be kept for three years after the close of the study, irrespective of the reason for closing the study. Studies that involve drugs or devices seeking FDA approval must be kept for two years after the FDA has taken final action on the marketing application. All records of human subject research are subject to inspection by federal authorities and the IRB.

Appendix D: Consent Form

INFORMED CONSENT

Harris Health System IRB
Houston, Texas 77054

TITLE:	Exploring How African American Race and Culture Alter a Patient's Perception of Diabetes Health Education
PRINCIPAL INVESTIGATOR:	Linda Marie Keenan
PHONE NUMBER:	713-566-6079
DEPARTMENT:	Disease Management and Population Health

STATEMENT OF RESEARCH

It is the right thing to do to have a person who is to help with research to agree to be part of the study. This consent must include what the research is for and what the risks are. This paper gives you information you need to decide to be in the study. Only people who agree can be in a research study. Please take your time to make your choice. If you have questions please ask.

WHAT IS THE REASON FOR THIS STUDY?

The reason for this research study is to find out what African Americans think are the best ways to get education to help take care of their diabetes, when compared to people of other races. You are a person who could help me because you are in a diabetes class, you are older than 18, and you speak English.

You will be asked to meet with the researcher to talk about what you think is best to help you learn. The information from your interview and of others will help to write new ways to give diabetes education that will help many ethnic groups.

HOW MANY PEOPLE WILL BE IN THE STUDY?

About 30 to 60 people will be in this study in at least 3 clinics at Harris Health System. People in as many as 12 clinics in Harris County may be part of the study. You will be interviewed at a place within the Harris Health System you like, or by telephone.

HOW LONG WILL I BE IN THIS STUDY?

You will be in 2 meetings for a total time of about 1 hour and 15 minutes. The first meeting will be about 45 minutes. You will come to the clinic where you have your diabetes class or a place you choose in Harris Health System, or you can talk to me on the phone. We will have a second meeting by phone or at the clinic to talk about your answers which will take about 30 minutes. If you are not able to come back to the clinic, then we can do the second meeting by phone to make sure I have your answers.

WHAT WILL HAPPEN DURING THE STUDY?

You will be asked the same questions as all the other people in the study about your race and what ways you like to best get diabetes education. It does not matter if you answer or do not answer a question, your care at the clinic and at Harris Health System will stay the same. I will write notes when I talk to you to make sure I have the answers you will give me, and I will non-digitally tape-record the first meeting to help me write everything after we meet.

HOW MAY I FEEL?

If you help in this study, you may feel upset by talking about your diabetes and daily life.

WHAT GOOD THINGS MAY HAPPEN?

You may not be helped by being in this study. I am doing this study for my college degree. In the future other people might be helped because what you say will help Harris Health System find better ways to give education about diabetes.

DO I HAVE TO SAY YES?

You do not have to be in this study. If you are in the study, you can decide not to answer any questions at any time.

WILL I HAVE TO PAY ANYTHING TO BE IN THIS STUDY?

You will not have to pay to be in this research study.

WILL I BE PAID?

You will not be paid for being in this study.

WHO IS PAYING FOR THE STUDY?

Harris Health System and I, as the researcher, will not receive any money to do this study.

PRIVACY

Your information will be kept private to the level allowed by law. Your study information may be read by government agencies, Harris Health System Institutional Review Board members, Walden University's Office of Research Ethics, Compliance and Linda M Keenan's Dissertation Chair and committee members.

All your information from this study will be kept private and only shared if you say yes or as the law lets me. You will be given a letter and a number code to keep your name private. All your information and tapes will be kept in a locked safe for at least 5 years and only I know the number to open it. I will look at the answers you gave me and then put them in my private computer to help me understand the information better.

The information from the study will be put all together and when shared with my school committee, my school, government agencies, and Harris Health System's Institutional Review Board, they will not know who you are.

DO I HAVE TO BE IN THIS STUDY?

You can say yes or no to the offer to be in the study. You can stop being in the study at any time and still come to the clinic for all your care at Harris Health. If you choose not to be in this study or if you choose to stop being in this study, you will not be refused care at Harris Health because of that choice. You need to sign this form to be in this study.

All of your study information and this signed form might be looked at or copied by Harris Health System's Institutional Review Board. This Board might read the information you give me to check how the study was done or for other uses allowed by law.

You have the right to see and copy your study answers for as long as Linda M Keenan, the principal investigator, has this information. This consent does not have an end date. You need to write a letter to Linda Marie Keenan at 2525 Holly Hall Drive, Houston, Texas 77054 if you no longer want to be in the study.

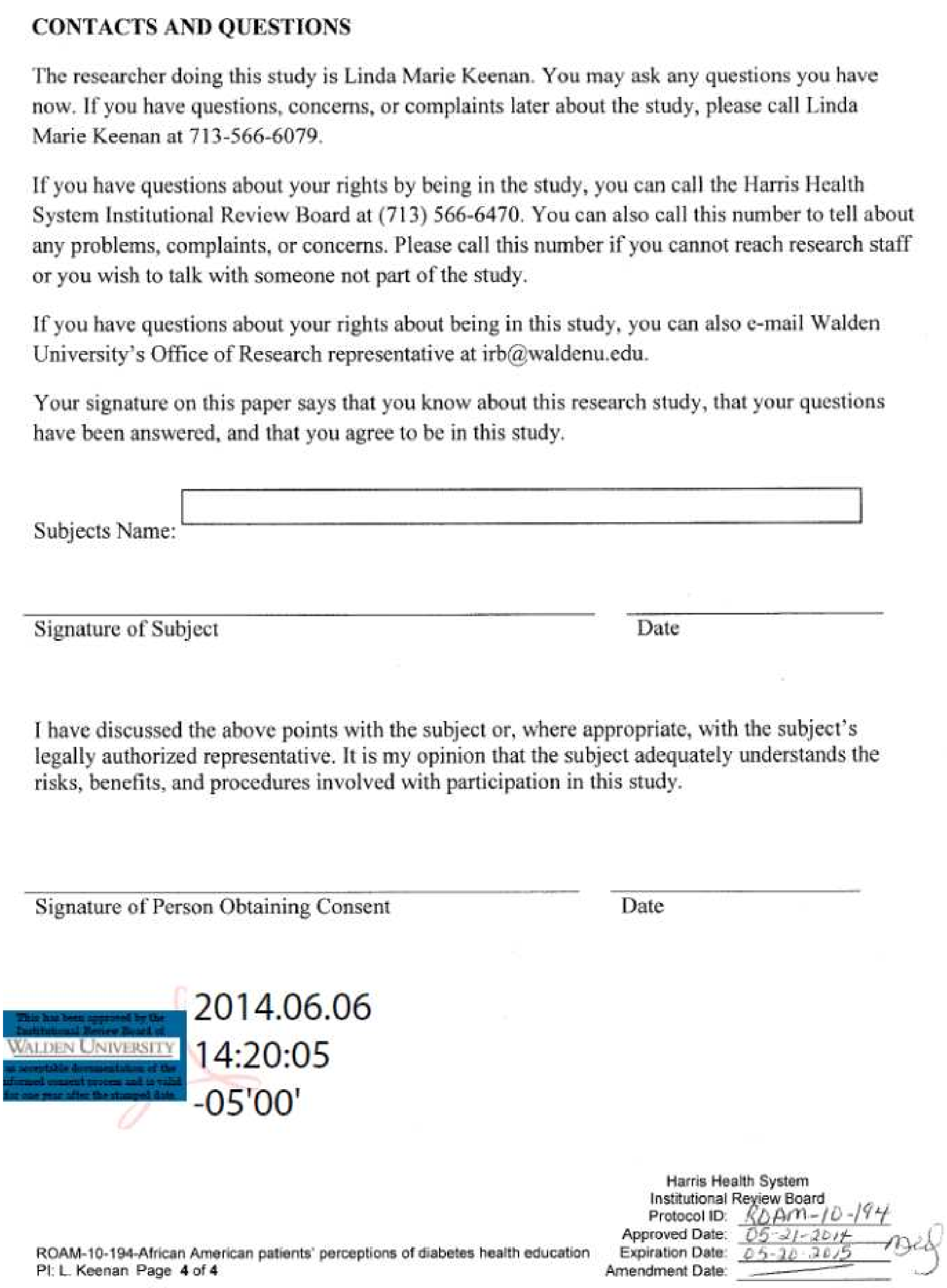
If you no longer want to be in the study, then Linda M Keenan, the principal investigator, will not keep or further share any of your information unless it is to make sure the study rules are met. If you no longer want to be in the study, it will not change the information that was already shared or read before you changed your mind.

In the event of injury resulting from this research, Harris Health System is not able to offer financial compensation nor absorb the costs of medical treatment. However, necessary facilities, emergency treatment and professional services will be available to you, just as they are to the general community.

AUTHORIZATION

I give permission to share my information about this study and this signed consent form to Harris Health's Institutional Review Board, my school committee, my school, and other government agencies as described in this form.

When I sign this form, I have not given up any of my legal rights by being in the study and I will be given a signed copy of this form.



CONTACTS AND QUESTIONS

The researcher doing this study is Linda Marie Keenan. You may ask any questions you have now. If you have questions, concerns, or complaints later about the study, please call Linda Marie Keenan at 713-566-6079.

If you have questions about your rights by being in the study, you can call the Harris Health System Institutional Review Board at (713) 566-6470. You can also call this number to tell about any problems, complaints, or concerns. Please call this number if you cannot reach research staff or you wish to talk with someone not part of the study.

If you have questions about your rights about being in this study, you can also e-mail Walden University's Office of Research representative at irb@waldenu.edu.

Your signature on this paper says that you know about this research study, that your questions have been answered, and that you agree to be in this study.

Subjects Name:

Signature of Subject	Date

I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative. It is my opinion that the subject adequately understands the risks, benefits, and procedures involved with participation in this study.

Signature of Person Obtaining Consent	Date

WALDEN UNIVERSITY

2014.06.06
14:20:05
-05'00'

Harris Health System
Institutional Review Board
Protocol ID: RDAM-10-194
Approved Date: 05-21-2014
Expiration Date: 05-20-2015
Amendment Date:

ROAM-10-194-African American patients' perceptions of diabetes health education
PI: L. Keenan Page **4** of **4**

Curriculum Vitae

LINDA M. KEENAN PhD (c), MPA, BSN, RN-BC, NMCC

AREAS OF EXPERTISE

- 20 plus years leadership and executive experience- Health Plan, Hospital, Service Line, Ambulatory Care, Managed care
- Operations- strategic planning, Integrated Delivery System, medical academic support and affiliations, multi –site responsibility
- Utilization of LEAN principles and change management skills
- Substance use, mental health, care coordination, utilization and resource management
- Population Management, contract management and negotiations, revenue cycle
- Joint Commission, DNV, HEDIS, NCQA, URAC, Magnet
- Federal and State regulatory agencies and standards
- Strong physician relationships and community network development
- Project management and program development
- Grant writing and RFP development

________________AMERICAN NURSING EXPERIENCE _________________

Harris Health System 2009-2014
Associate Administrator, Disease Management and Population Health- Harris Health System
April 2013 - Oversight 287 employees at a system level executive position focusing on disease management, case management (inpatient and ambulatory), population health, wellness and community outreach serving acute care facilities with a combined 700 bed capacity across 2 trauma centers, and 15 health centers with 1 million visits per year. Program development and to research and implement staff and providers specific to evidence based practice for chronic disease and care across the continuum. Responsibilities include financial accountability, grant writing, program development, and case management within the Patient Centered Medical Home, acute care, specialty services, quality management, patient education, physician satisfaction, utilization patterns and transitions of care. Responsible for quality outcomes across the continuum, to include Oncology case management, patient navigators, substance use assessment and counseling, diabetes service line. Accountable for utilization review and resource management, to include 24/7 transfer center and outside medical services authorization.

Chief Nursing Officer, Ambulatory Care Services, Harris Health System, Houston, TX
2/26/12- 4/1/13. Professional accountability for the practice and professional

development of nursing staff across ambulatory care services to include community health centers, Homeless Program and Specialty Care. Responsible for clinical, financial, and programmatic outcomes for Patient Centered Medical Home, Oncology, Patient Education, diabetes and cardio-pulmonary management.

Administrative Director Disease Management, Harris Health System, Houston TX 10/09-2/12. Clinical and financial accountability for implementing Disease Management to include Ambulatory Case Management with a focus on patient empowerment, nurse development and improving access via application of Best Practice Clinical Guidelines. Development of risk stratification tools and nurse/social work interventions for patient populations identified with chronic disease. Instrumental in physician and nurse Best Practice research, responsible for initial recognition of Patient Centered Medical Home and an Accountable Care Initiative. Active committee member of note for Nursing Information Systems Leadership, Executive Information Systems, Magnet Steering and Exemplary Professional Conduct.

Director Health Services, Renown Reno NV 1/02-.6/09. Clinical and financial operational accountability for case management, social services, medical management for HMO, PPO, TPA, ASO, Medicare Advantage Product lines. Adherence and implementation of Regulatory, State, Federal regulations to include on-site acute care audits, appeals process. Responsible for 24 hour nurse call center and oversight of PBM functions and formulary. Contract negotiations, marketing presentations, disease management in the home and telephonic oversight of complex care patients. Project manager for benefit design, utilization review and information systems. Education of primary care physicians and hospitalists related to case management, utilization, technology, criteria and referral management.

Director of Nursing, Skilled rehabilitation and LTC facility, 199 beds Reno NV.
5/01-12/01
Responsible for Clinical, financial and quality aspects of Nursing Care delivery. Regulatory, Federal and State survey compliance, clinical education, quality assurance and instrumental in the admission process. Company reorganized.

Administrator Psychiatric Program/Director of Nursing, Behavioral Healthcare Corp Inpatient and outpatient psychiatric and chemically dependent /dual diagnosed clients, *Oct 99-3/01.*
Responsible for clinical, financial and educational components of the nursing department. Development of age specific patient programs, clinical crisis interventions, and group facilitator. Public presentations for physicians related to marketing, increasing census and case mix adjustment. Active participation in contractual arrangements, reimbursement, performance improvement and education of professional staff. Member of community

agencies and affiliated with CPS, foster care and juvenile detention centers. Hosted radio show with Primary Care physician.

Director Case Management, Reimbursement and Transplant program for 4 integrated hospitals - Baptist Corporation Memphis TN 1996 to 1999**.** Responsible for clinical and financial operations inpatient and outpatient, social services, quality management and appeals/denials, Medicaid, Medicare. for Acute Care, Rehabilitation, Skilled Nursing and Psychiatry .Direct reporting to Medical Director of Baptist IPA for bed days, integrated case management and PBM reporting. Grant writing, program development, regulatory compliance, physician and staff education regarding managed care resource management. Formulation of contractual language for integrated and large case management. Disease management team leader. Project leader for admission and case management/patient care software implementation and training. National speaker and local University lecturer to BSN and HIM students.

Nurse Consultant - *Northern CA, Sole proprietor* initiated 1/95 offering services to include: systems analysis, case management, psychiatric client education. Medical and legal review of records, reimbursement and compliance to state and federal regulations. Expert witness for attorneys.

Director Utilization Management -*SunRidge Psychiatric Hospital Northern CA.* Sep. 94 to Jun. 95.
Implementation of case management of all patients from triage through discharge. Responsible for budget, program marketing, community liaison, education, and orientation of staff for three departments. Development of IOP and Residential Center. Performed initial psychiatric assessments and concurrent review of charts to coordinate benefits, delivery and adequacy of care for patients and reimbursement for all levels of care. Initiated appeals for denials. Member of Executive Management Team. Directed QA of department. Left position as hospital merged with another outside of the geographic area.

Psychiatric Nurse - *United Behavioral Healthcare Dayton OH, Managed care,* July 91 to Mar. 94. Utilization review of in-patients and case management of outpatients. Medication management and individual counseling and facilitator of 3 groups. Liaison with psychiatrists and primary care physicians, crisis intervention, case management of the chronically mentally ill, substance addictions, and coordination of admissions and participation in QA data collection and trending.

Primary Nurse -*CCU/ICU/ Open heart/Trauma, Miami Valley Hospital Dayton OH, 600-bed teaching hospital.*
Total patient care utilizing invasive monitoring skills. Primary care for ventilator -

dependent patients.

> ** The preceding two positions were held simultaneously, ensuring clinical competence in both specialty areas.*

Nurse Manager - *Acute 32 bed Telemetry Unit. Greene Memorial Hospital Xenia OH* Aug. 89 to Jan. 91. Coordination of all unit activities to include budgeting, staff education, quality assurance and recruitment of staff. Active committee member for Critical Care, QA, Nurse Practice and Nurse/Physician Relations. Rotational House Supervisor for CCU/ ICU, ER and OR. Transferred from this position to relief RN at same hospital in Feb. 91 to work on ER, Mental Health and Home Health.

Director of Nursing and **Director Staff Development and Staff RN ICU/CCU-** *Northern CA*, Long term, acute and skilled. 1986-1989
Duties-Initiation and maintenance of staff education, hiring, scheduling of personnel. Accountable for nursing standards of care, budget, compliance, MDS and participation in State and Medicare surveys.

ENGLISH NURSING EXPERIENCE

Nurse Practitioner - Hospice Home Care - Occupational Industrial RN. Night supervisor

EDUCATION

PhD student Public Policy and Administration (healthcare) - *expected graduation 2014*
MPA/Health Services Admin, Keller Graduate School of Management
BSN Chamberlain College of Nursing
ANCC General Nursing Practice
ANCC Psychiatric Mental Health
National Managed Care Certification NMCC
FACHE in progress
RN Nursing School - Peterborough, England

ACCOMPLISHMENTS

Governor appointed member Self Insured Workers Compensation Nevada Board
Elected Alternate for House of Delegates for TNA
Active participation, project writer and owner for Medicaid Texas 1115 Waiver initiatives
Good Samaritan Texas 2011 Gold Nursing Excellence Leadership and Administration award
Leadership Development faculty for organization Fellows leadership programs
Current guest lecturer for Geriatric program at University of Texas
National presenter for National Institute for Case Management

National presenter for CHI consulting- Utilization and Case Management
Abstract and Poster presentation to CDC Diabetes Translation Conference 2011
Abstract and Poster presentation to AAACN Conference 2013
National lecture presentation- Society of Teachers of Family Medicine
Presentations to visiting healthcare providers from Russia, Norway Ministry of Health, and China
Preceptor for MSN and DNP practicum for Texas Women's University and University of Texas
Webinar presentation- American Association of Heart Failure Nurses 2014

PROFESSIONAL MEMBERSHIPS

American Academy of Ambulatory Care Nursing
American College of Healthcare Executives
American Nurse Association
American Public Health Association
American Society of Public Administration
Case Management Society of America
Texas Nurse Association