ABSTRACT

PATIENT PERSPECTIVES ON HYPERTENSION TREATMENT

By Anne Swanson Janning

Hypertension affects millions of people in the United States. Some patients do not realize the importance of following their prescribed hypertension treatment. Many do not realize they have hypertension, so when started on medication they do not feel any different, even when their hypertension is controlled. They may feel worse from the side effects of their medications, such as increased tiredness. Since many do not feel symptoms, it can be difficult to understand why a person needs to be on hypertension medication, unless they understand the long term effects uncontrolled hypertension have on the body.

The purpose of this study is to gain insight into patients' perspectives on their hypertension treatment. This study will help providers understand what patients feel and what they understand about their treatment. Providers will then have a better understanding of patient needs with their hypertension treatment and where the provider may need to provide more education to the patient. The research study is a descriptive qualitative study. The participants were selected by snowball sampling and were interviewed once by the researcher. Interviews continued until data saturation was achieved. This research provides valuable information for providers who treat patients with hypertension.

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by

Anne Swanson Janning

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____________ Advisor

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I would like to dedicate this paper to my family – to my husband, Jeremiah, for all the love and support and sacrifices throughout this long process. He gave me strength and encouraged me when I didn't think I could do it anymore; to my daughter Allison for making me smile and laugh; to my parents who baby sat Allison and took care of her when I was busy with school, and gave me support and love and also encouraged me to keep going; and to the rest of my friends and family for believing in me and being there for me until the end.

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Chapter I

Introduction

Hypertension is a common diagnosis. Hypertension affects approximately one of three adults in the United States, and about 2 million new cases are diagnosed each year. Globally, hypertension affects more than 1 billion people and is projected to reach 1.56 billion by 2025 (Quang, Joann, Loida, & Gullapalli, 2010). Hypertension is usually a chronic disease which can lead to long term complications if patients do not adhere to their treatments. It is the leading cause of death and the second leading cause of lost disability adjusted life-years worldwide (Quang et al., 2010). Patients may not realize the importance of following the hypertension treatment. The aim of hypertensive management for patients is to improve quality of life and prevent complications, thus decreasing mortality and morbidity (Lahdenpera & Kyngas, 2000).

Hypertension is considered the “silent killer” because many do not realize they have hypertension. When started on medication, patients often do not feel any different even when their hypertension is controlled. In fact, they may often feel worse from the side effects of their medications, such as increased tiredness. Since many do not feel symptoms, it can be difficult to understand why a person needs to be on hypertension medication unless they understand the long term effects of uncontrolled hypertension on the body. Randomized controlled clinical trials have shown that control of hypertension reduces the risk of stroke, coronary artery disease, congestive heart failure, end stage renal disease, peripheral vascular disease, and mortality (Quang et al., 2010).

Oftentimes, the etiology of hypertension is unknown. However, some causes of hypertension are chronic kidney disease, coarctation of the aorta, Cushing syndrome, obstructive sleep apnea, medications, pheochromocytoma, primary hyperaldosteronism, renovascular disease, and thyroid or parathyroid disease (Quang et al., 2010). Some lifestyle modifications can prevent the use of medication to control hypertension. Such lifestyle modifications are exercise and diet. When used early, lifestyle modifications can decrease other disease risks and may eliminate the need for drug therapy. Maintaining a healthy lifestyle, however, is often not sufficient and is difficult to maintain. Most patients will require pharmacologic interventions to control blood pressure (Quang et al., 2010).

There have been many studies on patient compliance or adherence to hypertension treatments and patient education about hypertension. In a study by Elliott (2009), which examined patient adherence to medication, results revealed that patients complied with medications having the least side effects. Patients had the most difficulty adhering to medications when the regimen was complicated or there were multiple medications prescribed. Research by Pereira and Azevedo (2008) explored why so many patients still had elevated blood pressure. They concluded that it was partly due to the cost of medications, physician and patient relationships, and lack of communication between the physician and the patient. The researchers also felt that providers did not follow the guidelines for when patients should be started on medications. There has been a study by Patrick and Deyo (1989) on patients' perspectives on hypertension, but the studies have not provided a clear understanding of the patient's point of view. Different tools to measure patients' perspectives were noted in the literature. There has not been one standardized tool used to understand

patients' perspectives in regards to hypertension. Many studies use the health-related quality of life (HRQR) questionnaire. Health-related quality of life instruments are used to describe health states, compare patients in different diagnostic or prognostic categories, measure change in health status after an intervention, and predict future states (Bounthavong & Law, 2008). In a study by Patrick, the results found that generic instruments have low content validity owing to a lack of items relevant to the diseases (Patrick & Deyo, 1989). The problem in developing measurement instruments lies in knowing how to elicit the patient's responsibility and desire to set goals for their own treatment and whether we can ever measure any phenomenon comprehensively (Lahdenpera & Kyngas, 2000).

There has not been a clear definition of hypertension treatment. Some studies lump together treatments for hypertension and do not focus on one treatment. Hypertension can be treated with lifestyle modifications, such as diet, exercise, and smoking cessation. If this does not improve the blood pressure, then the provider will add medication to the regimen. There are many different options to treat hypertension, lifestyle modifications, such as diet, exercise, and smoking cessation, along with medications that can be effective. Research studies can be difficult, since there can be so many variables affecting a person's hypertension. The efficacy of antihypertensive therapy is well established, and various professional organizations intermittently produce evidence-based clinical practice guidelines for the management of hypertension; however, these guidelines often disagree about the treatment threshold for patients with mild, uncomplicated essential hypertension (McAlister, O'Connor, Wells, Grover, & Laupacius, 2000). This could be confusing for patients if they switch providers, since many providers have different points of views, and each provider may not follow the

same guidelines for hypertension. Even with research on patient perspectives, further research is needed so providers understand patients' views on appropriateness of their hypertension regimen. It is a complex and multidimensional task to understand a patient's perspective. Incorporating individual patient preferences into the rigid criteria advocated by evidence-based guidelines has numerous difficulties. The study by Morecroft, Cantrill, and Tully (2005) suggests that this problem is even more complex than that considered by previous research, not only because patient's differ in their views of appropriateness, but also because some attributes are implicit.

Understanding why a patient will or will not accept hypertension treatment is crucial for nurse practitioners. Hypertension, if uncontrolled, can lead to many health complications for a patient. A medical history and physical examination are necessary for all patients with hypertension. The main goals are to look for reversible precipitating factors, the presence or extent of end-organ damage, and the presence of additional cardiovascular risk factors, such as diabetes or smoking (Quang et al., 2010). This is the goal for all nurse practitioners – to understand the patient's perspective regarding their hypertension diagnosis and treatment. Studies have shown that patients do not have the same views as practitioners regarding hypertension treatment. Patient preferences for antihypertensive therapy vary widely, and the correlation with physician preferences and the thresholds specified in current guidelines is less than ideal (McAlister et al., 2000). Understanding the patient's view on their hypertension treatment will help nurse practitioners tailor individual treatment plans. Nurse practitioners need to share their knowledge and educate their patients on hypertension. Patients differ widely in their knowledge, ideas, and attitudes about illness and treatment, and they bring these to the consultations (Birks, 2009). Nurse practitioners

also need to give rationale as to why a patient is on a certain medication or making lifestyle modifications. Achieving a common interpretation of the problem and agreeing upon a shared treatment plan relies on a knowledge and understanding of each other's perspectives. Failure to discover the patient's perspective and reach a shared understanding about illness and treatment can lead to discordance between the patient's choice of treatment and the clinician's recommendations (Birks, 2009).

If a provider does not understand a patient's perspective on their hypertension treatment, the patient may not fully follow the treatment. If there is not an understanding of the patient's views, the provider and the patient may not be on the same page, and this may lead the patient to not fully follow their provided hypertension regimen. The provider may feel that they are providing the best quality care for the patient by following the most up to date guidelines, but this may not be what the patent perceives the best treatment to be, and this becomes a problem. The patient may have a conflicting view from their provider whether the provider is a nurse practitioner or physician. A certain level of knowledge about treatment is essential, but health professionals should not assume that the only thing required to prevent non-adherence is to give more information (Birks, 2009).

The purpose of the descriptive study was to investigate patients' views and perspectives on their hypertension treatment, thus providing nurse practitioners a better understanding of what keeps a patient following their regimen or not following their regimen. If the patient's perspective is not understood, it may be difficult to understand why a patient is not adhering to their hypertension regimen. This can be frustrating for providers, who may have thought that they explained why the patient is receiving a specific treatment. This study explored patients' perspectives on hypertension

treatment, attempting to understand their views on hypertension in regards to their current treatment, leading to a better understanding of why patients may or may not adhere to their regimen. There is pressing need to address non-adherence and develop effective strategies to make the delivery of health care more efficient and responsive to patient needs (Birks, 2009). The researcher analyzed patients between the ages of 18 and 60 years of age. The participants had been diagnosed with essential hypertension and are currently being treated with at least one antihypertensive medication. The researcher used snowball sampling to find participants.

The conceptual definition of hypertension incorporates the increased risk for cardiovascular diseases, based on benefits, risks, costs, death, disability, and quality of life (Pereira & Azevedo, 2008). Treatment in this study was conceptually defined with several components, such as lifestyle modifications, pharmaceutical regimen, and provider follow-up visits.

Hypertension is operationally defined for adults as having a mean systolic pressure reading equal to or greater than 140 and a mean diastolic pressure equal to or greater than 90 or if they report taking a blood pressure medication (Healthy People 2010). Blood pressure is measured using a sphygmomanometer. Blood pressures are taken either manually or with an electronic blood pressure cuff. In this study, hypertension was classified with a blood pressure reading that is equal or greater than 140/90. The number of blood pressure readings taken prior to a hypertension diagnosis was not collected.

There have been no standard definitions for treatment. Treatment operationally defined in this study was based on the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (Belletti, Zacker, & Wogen,

2010). All non-diabetic patients with a blood pressure of 140/90 should be treated with an anti-hypertensive medication Such medications are an angiotensin converting enzyme inhibitor (ACE), angiotensin II receptor blockers (ARB), beta blockers, calcium channel blockers, alpha blockers, direct rennin inhibitors, and diuretics (Belletti et al., 2010). Treatment also included diet modifications, exercise regimens, and smoking cessation education.

Assumptions in the study included (a) themes will emerge from the interviews of the participants, (b) participants will have similar views on their own hypertension treatments, (c) participant demographics will affect the participants viewpoints, (d) subjects who are close in age, socio-economic background, or educational background will have similar feelings on their treatment, and (e) open-ended questions by an interviewer are the best way to gather the information needed because response rates tend to be higher with face-to-face interviews.

In summary, hypertension is a very common diagnosis, and people struggle with controlling their hypertension on a daily basis. If patients can manage their hypertension, it will improve their quality of life. Patients have different views on hypertension treatments, and it is important for nurse practitioners to understand these views in order for the nurse practitioner to provide the best possible treatment for the patient. Nurse practitioners will understand the patients' needs and also be aware which area the patient may need further education. If patients are properly educated on hypertension treatment, they may follow the course of their treatment rather than abandoning the treatment because they will understand the rationale behind the treatment.

There has not been any disease-specific health surveys created for hypertension that have been used in various studies. Many studies have created and tested their own research tool or used a general health survey and then added additional questions regarding hypertension. Further research needs to be done on patient perspectives of hypertension. Some studies look at both the views of the provider and patient on hypertension. More studies geared towards the patients' perspectives are needed. The purpose of this study was to look specifically at patients' perspectives on their hypertension treatment. This study analyzed the views of the patient. The definitions of hypertension and treatment are conceptually and operationally defined based on reviews of similar studies.

Chapter II

Theoretical Framework

A theoretical framework is important, as it guides the research process and aids in the interpretation and analysis of the data in the research study. Nursing theory also relates current research to previous work. The Health Belief Model (HBM) will be used in this study (Polit & Beck, 2008). The model postulates that health-seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat. Understanding patients' values is important to nurse practitioners, so they can know what treatment is the most beneficial to the patient, thus enabling nurse practitioners to tailor the treatment for each individual patient. When treatment is individually tailored, patients will know their views have been heard and respected by the nurse practitioner, leading to adherence to the regimen the nurse practitioner has provided. Perceived susceptibility, perceived severity, perceived benefits and costs, motivation, and enabling or modifying factors are the major components of the health belief model (Polit & Beck, 2008). The nurse practitioner needs to acknowledge the patient's views on hypertension to provide the best care possible. The above health belief model will be incorporated into this research study.

Hypothetical Case Study

A 53-year-old male visits his nurse practitioner for a physical, and it is discovered that he has essential hypertension. His blood pressure is 166/94. He is not allergic to any medications and does not currently take any medications. He is generally healthy

and has no complaints today in regards to his health. There is a family history of coronary artery disease and hypertension on his father's side. His father is 88 years old. The patient recently lost his job and wanted to get his annual physical before his insurance runs out. The nurse practitioner prescribes an antihypertensive medication that is moderately expensive without insurance. He is hesitant to take the medication, because he is not sure if he can afford it. Using the health belief model and incorporating it into the case study, the patient does not perceive this diagnosis as accurate because he has never had a reading as high as it was the day of his physical. He does perceive the illness as a slight threat, but the perceived cost of the medication outweighs the perceived threat in his current jobless position. The patient will struggle to pay his mortgage due to his recent job loss. The perceived benefit of the medication is difficult for the patient to understand. Currently, he does not feel ill with his high blood pressure. It has never been this high before, so therefore, he does not want to take the medication.

If the nurse practitioner took the time to understand the patient's perceived understanding of the medication, costs, and severity of the illness, the nurse practitioner would have discovered that the patient is unsure about the diagnosis and cannot afford the medication. Understanding the patient's perceived view of the plan would allow the nurse practitioner to tailor the plan and educate the patient. This would benefit the patient and provide a better outcome. The patient, as it stands now, will probably not follow his prescribed hypertensive treatment.

Literature Review

A literature review was conducted that explored various research studies on hypertension and patient perspectives and examined the methods, definitions and instruments used in the studies. The literature review was limited. The words "provider perspective," "patient perspectives," and "adherence" or "compliance" was used to search for studies. There were a limited amount of studies that met all three categories. Many studies focused on either patient or provider perspectives on hypertension.

A Canadian study (McAlister et al., 2000) examined the different perspectives of family physicians and patients on when to treat hypertension. The study was a quantitative study with a random sample of 94 physicians and 146 patients. The physicians were from Ottawa and Edmonton, Canada. The patients had mild essential hypertension without cardiovascular disease. The family physician participants and the patient participants were given various hypothetical scenarios involving hypertension and asked to decide whether the patient in the hypothetical scenario should be prescribed hypertension treatment. The results showed that patients, in general, were less likely to see the need for antihypertensive therapy than physicians, particularly when cardiovascular risks were low. Patients wanted greater benefits before accepting therapy. The authors created their own research tool to determine the minimal clinically important differences. The study had many limitations, including the patient sample. The sample only included patients who were diagnosed with hypertension and under the care of a physician. The authors suggested they could have included patients that were not currently being treated for hypertension but had the diagnosis. Also, they suggested that they could have included non-hypertension subjects. The authors only interviewed each subject once. The authors also included the cost of the antihypertensive therapy,

which may influence the subject's decision to decide if the hypothetical patients should be started on therapy. The authors suggested that the limitations were unavoidable and could be potential areas for future research.

A qualitative study by pharmacists looked at patient and provider perspectives on the quality of life in patients with multiple chronic illnesses – diabetes, hypertension, and dyslipidemia (Bounthavong & Law, 2008). The sample consisted of 38 patients and 21 providers who were pharmacists. There were three qualitative researchers that reviewed the interviews. The study used an interview technique to examine patient's health related quality of life (HRQL). A qualitative survey was developed that had 11 demographic and medical history questions and nine content questions that were broken down by disease state. Questions were developed based on review of the literature and expert opinions. Limitations of the study were that the patient samples were from the same socio-economic background. The sample size was small and the sample was a convenience sample. The gaps in literature suggested by the study were that there is a lack of standardization in the development of disease specific HRQL instruments and in using patients' and providers perspectives to identify domains. Patients' perspectives focused on self-care, complications, education, and resources, which are not necessarily HRQL issues.

A study by Lahdenpera and Kyngas (2000) researched the evaluation of compliance in patients with hypertension. In the study, the researchers looked at the definition of compliance from previous studies between the years of 1980 and 1999. The authors used Medline and Cinahl to find previous studies to review. They reviewed 13 studies. In nine studies, the authors used the term compliance, but they did not define the term. In three studies the authors used the word adherence. However, in two of the

studies, the authors failed to define the term. There is not one standard way to determine compliance. Different techniques have been used to determine compliance, such as pill counting, writing in diaries, and questionnaires, but not one seems to be the best to measure compliance. The results of the study by Lahdenpera and Kyngas showed that there was a variance in the evaluation of compliance. The gap in literature shows that there is not a clear way to determine compliance. One research suggestion the authors recommended was looking at blood pressure to see if that was an indicator of compliance, which could be used in further research.

A study by Morecroft et al. (2005) explored how patients and general practitioners construct the concept of appropriateness in the context of hypertension management. The study used Q-methodology. The sample consisted of 120 patients and 12 general practitioners. The participants looked at 42 statements about hypertension treatment and marked whether they agreed or disagreed with the statements. The questions involved both clinical and non-clinical attributes. The study results showed that general practitioners and patients varied on their views of hypertension management. Patients do not base their medical treatment solely on medical reasons, but on how the medication will impact their personal lives. Patients looked at the side effects of the medications and how the side effects will impact their career and lifestyle. Patients weighed their own perceptions of the pros and cons of a treatment, which they may or may not disclose to their general practitioner. The study suggests that future research is needed in this area. Further research should be undertaken into patients' views of appropriateness. This would give an opportunity to optimize treatment, ensuring a finer fit between guidelines and practice.

Pereira and Azevedo (2008) examined multiple countries' guidelines for hypertension. In every country, all definitions consider hypertension as systolic greater or equal to 140 and diastolic greater or equal to 90. They found that not all physicians complied with the guidelines. This depended if the physician accepted and stayed up to date on the most current research. Sometimes, it was not always the physician who was at fault for not treating the patient. Patients may not like the idea of going on medication or lifestyle changes. The conclusion is that only a minority of hypertensive patients are effectively managed, which suggests that the guidelines are not being effectively followed. The poor guideline awareness by physicians and non-compliance by patients may contribute significantly to these disappointing results (Pereira & Azevedo,2008).

It is known that there is a difference between patients' and providers' perspectives surrounding hypertension treatment. Providers usually follow guidelines; guidelines for the treatment of hypertension were first published in 1977 and are regularly updated (Pereira & Azevedo, 2008). Overall, the guidelines the providers follow provide correct information to effectively treat hypertension. Patients normally have a different point of view regarding their hypertension treatment. They not only look at the medical aspect of their treatment, but also at the non-clinical part of the treatment, such as the inconvenience of taking a medication or the cost of the medication. These findings confirm that the patient's evaluation of their care and medication is based on its impact on their everyday capacities and expectations and are inseparable from other aspects of their lives (Morecroft et al., 2005).

A standard tool to assess the patient's perspectives on hypertension has not been found. Many researchers have created their own tool, with limited validity studies.

Without a standard tool, it can be difficult to study patients' perspectives and validate the study.

Overall, there needs to be further research on patients' perceived perspectives of their hypertension treatment. Understanding what is important to patients will help providers educate patients if they do not understand their treatment or prescribe a different antihypertensive medication if cost is a factor. There are multiple changes providers can suggest to work with patients once they are aware of the patients' perceptions. While patient-centered care and genuine patient involvement remain rare as a model or guide for professional practice, they continue to have value (Birks, 2009). In the past, practitioners have not included patients in their care and did not value their input. Many patients continue to have uncontrolled hypertension. Discovering and understanding patients' perspectives in regard to their hypertension could improve patients' health. They may then adhere to the prescribed hypertension treatments.

In summary, the health belief model (Polit & Beck, 2008) can be incorporated into the study to help nurse practitioners understand patients' perceived perspectives. There have been some studies done on patients' perceived perspectives, but not all focus only on the patient; some focus on the provider along with the patient. Having more focus on patients' perceived perspectives of hypertension will allow the nurse practitioner to focus on the needs of the patient and provide more patient-tailored care. Patient treatment for hypertension includes medication and lifestyle changes, such as diet and exercise. This study focused on patients prescribed medication regimen and lifestyle modifications. Lifestyle modifications can be just as important as taking medication, so the study will focus on if the patient has attempted any type of lifestyle modification, such as diet, exercise, and smoking cessation. The questions of the study focused on patients'

emotional and social wellbeing, along with life style changes and follow up provider visits. These treatment categories were based on the literature review.

Chapter III

Methodology

The purpose of this study was to understand patients' perceived perspectives on their hypertension treatments. This chapter will outline the study design, the sample, the data collection procedure and the limitations of the study.

Study Design

The study design was a descriptive qualitative study of patients' perceived perspectives on hypertension treatments. This was the best possible method for this study because this allowed patients from multiple clinic sites that would voluntarily want to participate in a study. Each participant was interviewed once. Interviews lasted from 30 to 60 minutes and were semi-structured to ensure that all data needed on the topic would be obtained. Data from verbal face-to-face interviews were analyzed by the primary researcher; a second researcher also analyzed the data for themes. The first step was to read all the interviews. Then they were reread. Themes were identified from the interviews. The final step was to transform the themes into the description of the phenomenon. The goal was to capture the patients' perceived perspectives of hypertension treatments.

Population, Sample, and Setting

The sample consisted of men and women who had been diagnosed with hypertension. They ranged in age from 18 to 60 years, so they would fit into the adult definition of hypertension. Participants were currently being treated for hypertension,

whether it was lifestyle modifications, medications, or both. The exclusion criteria for the sample populations would be if participants did not speak English. The sample was purposive and was collected by snowball sampling. Purposive sampling method was the best method for this study, because the study focused on patients with hypertension, thus the sample needed to consist of participants with hypertension. The participants were included on a volunteer basis, and the interviews were done until data saturation was reached.

Data Collection Instrument

Data collection involved a face-to-face semi structured interview. This allowed the researcher to obtain the needed information. Questions were structured, but also open-ended. Participants were encouraged to talk openly on the topic. More specific questions regarding hypertension were included in the interview. Such questions focused on antihypertensive medication, emotional wellbeing, social wellbeing, diet, exercise, and follow up appointments.

Data Collection Procedure

Permission for the research proposal was granted from the University of Wisconsin Oshkosh Institutional Approval Board (IRB). Research began once the approval was granted by IRB.

Consent was obtained by each participant before taking part in the interview (Appendixes A and B). Participants also separately agreed to have the interview recorded. The participants had the study explained in detail and had a clear understanding of the study before signing to give permission to participate in the study.

The participant's identity was protected. No names were used in the study. The data were collected by a face-to-face interview. The interview was recorded and then transcribed. The interviews took place in a neutral area of the participant's choice to make them the most comfortable. The interviews took place in a location that was private and quiet, therefore, reducing the chance of interruptions. The private, quiet location also reduced the background noise when the recorded interview was played back. It was made clear to the participant that at any time during the interview, it could have been stopped. The data were collected by the primary researcher alone.

Data Analysis Procedure

The data from the interviews were analyzed using Giorgi's method. This method included seven steps. The data was analyzed using each step. All the data were initially read to get on overall sense and then the data was reread. Once this was complete, multiple themes began to emerge. Giorgi referred to themes as transition units of the experience (Pollit & Beck, 2008). The themes were compared and related to each other and then were related to the whole. The final step was to take all components of the participants' experience and hone it into a meaningful description.

Limitations

Limitations of the study included:

- The small sample size.
- The method of collecting the sample was snowball sampling, which would allow for the participant to have prepped for the interview, since they were referred by someone who was already interviewed.

- No demographic information was collected.
- The primary researcher was the only interviewer and one of the two reviewers of the information collected, which could lead to bias.
- The primary researcher did not go back to the participants with the themes to verify if they were appropriate to the participants.

A descriptive qualitative research design was used. The design study included 12 participants with hypertension. The participants were from a Midwestern city. The sample was a convenience sample. The data were collected by face-to-face interviews by the researcher. The participants answered questions about their hypertension treatment. The data were reviewed, and themes were identified by the primary researcher and a second researcher.

Chapter IV

Results and Discussion

Introduction

The purpose of this study was to explore patients' perspectives on their hypertension treatment and to understand what knowledge patients have regarding hypertension. A total of 12 people with hypertension were interviewed. Each participant answered the following questions: (a) What were the symptoms, if you had any, that caused you to seek treatment? (b) What was your blood pressure when you were first diagnosed? (c) What is your understanding of high blood pressure? (d) Are you taking medications for your blood pressure? (e) How do your medications make you feel? (f) How has being on medications impacted you financially? (g) Does your insurance cover the cost of your medications? (h) Do you see a doctor regarding your hypertension? (i) Have you made any lifestyle changes? (j) What is your understanding of what happens if your blood pressure is not controlled? (k) Do you feel your blood pressure is controlled now? (l) What was your last reading? The answers were then reviewed and themes were formed.

Sample Description

The data were collected by the primary researcher by face-to-face interviews. The interviews lasted from 30 to 60 minutes. The sample was collected by snowball sampling. The initial participant was contacted by the interviewer, and thereafter, the participant was referred by the previous participant. The participants were from a Midwestern city and were from a variety of clinics.

Interview Process

The interviews were face-to-face interviews. The place where the interview took place was a quiet place. The place was chosen by the participant. This was to help ensure that the participants felt comfortable answering the questions openly and honestly. All participants agreed to have their interviews recorded. Each participant answered the questions to the best of their ability. The questions were open ended and allowed the participants to share their thoughts on hypertension.

Themes and Subthemes

The interviews were audio-taped and then transcribed. The transcripts were reviewed multiple times to find similar themes throughout each interview. Giorgio's phenomenological approach was used when interpreting the data. Three main themes emerged when analyzing the data. They were (a) no clue, (b) limited understanding, and (c) partial accountability. In the second and third themes, subthemes emerged. The second theme, limited understanding, had the subthemes, (a) consequences and (b) disease management. In the third theme, partial accountability, the subthemes were, (a) diet, (b) exercise, and (c) medication.

Theme One: No clue. . The participants stated that most did not have any idea that they had hypertension. For most of the participants, the diagnosis of hypertension was an incidental finding at a doctor's appointment, which they had made for another reason. "I didn't have any symptoms I went in for a routine physical." This was seen throughout many of the interviews. "I didn't have any (symptoms), it was found during a doctor's appointment. "I felt fine. I had a screening for church and they told me to go to my doctor because my blood pressure was high." Many of the participants did not

experience any symptoms or feel ill. “No I did not have any symptoms, it was found when I went to a doctor’s appointment for my asthma.” “I didn’t have any symptoms, unless I didn’t know what they were. I just went to the doctor and I was told that it (blood pressure) was high.”

Theme Two: Limited understanding. Many of the participants did not have a clear understanding of hypertension or what the consequences of uncontrolled hypertension were. Some participants had a partial idea, but there was not a full understanding. None of the participants could give a definition for hypertension. They often hesitated when answering this question. Many knew that it had something to do with the heart, but were unsure exactly the mechanism of hypertension.

Subtheme: Disease knowledge. The knowledge that the participants had was very vague. They could not succinctly describe hypertension. Overall, many participants knew that it had to do with the heart and there often was “too much pressure on the heart.” Many felt that it stresses the heart, but that was the extent of their knowledge. The participants had various answers and levels of understanding when asked what their understanding of hypertension is.

“It causes excess pressure on your heart which can lead to damage.”

“High blood pressure is caused by stress which causes extra beats that puts stress on the heart.”

“It stresses the heart if it is elevated, the heart is like the engine for your body, if it isn’t running well your body doesn’t run well.”

”I could have a heart attack if it is not controlled”

“It’s dangerous but preventable.”

"I don't know. I don't ever remember my doctors ever telling me what high blood pressure is. So I'm not sure."

"It causes stroke, vein problems and other heart problems."

The participant's responses did not always give a definition. Some answered what damage could occur if they continued to have uncontrolled hypertension, but they could not describe hypertension. They knew it was not good if it was not controlled, but they did not understand the pathophysiology of hypertension and how this causes damage to the body. In a study by Elliott (2009), it was found that involving the patient in treatment decisions, as well as ensuring that the patient understands the consequences of hypertension, the importance of its treatment, and adequate follow-up, along with modifying the regimen, are all necessary to achieve the target blood pressure level may also be important.

Subtheme Two: Consequences. The participants of the study knew that their body would not be at the healthiest that it could be if their blood pressure was high, but not all knew what hypertension could cause; some just knew that it was detrimental.

"My kidneys will get worse, although I'm already close to having dialysis."

"My heart would work harder; it's bad for my kidneys. Pretty much bad for all my organs and probably terrible for the arteries, I could blow a gasket! I mean have a stroke!"

"You will die."

"Stroke, heart attack, kidney disease blah, blah, blah, I know I should watch my pressure more."

"I could have a heart attack or stroke."

"You will die"

The participants, overall, understood that it would damage the body if their blood pressure was not controlled. Some knew that it could lead to other diseases, such as heart attack or stroke. Numerous observational studies (Elliott, 2008; Pereira & Acevedo, 2008) have demonstrated a strong association between high blood pressure and the risk of coronary heart disease.

The third theme was *partial accountability.* Most of the participants knew what to do to control their hypertension, such as exercise, diet, medications and provider follow up. Most could tell the researcher what they should be doing but not everyone was doing lifestyle modifications even though they were aware this would lower their blood pressure.

Theme Three: Partial Accountability

Subtheme One: Diet. The participants knew they should modify their diet, but many did not.

"I've always been sensible but I am more conscious of what I eat, try to eat more healthy now."

"I quit smoking, lost weight, watch my salt intake actually I shouldn't have any additional salt on my foods. I try to be good about that stuff but it's hard."

"I'm supposed to eat better, but I'm not very good at that."

"I try to have a low salt diet but it is hard because I really, really like salt."

"None at all, I haven't changed a thing."

"Maybe I watch what I eat but I ate pretty well before."

Many of the participants found following a healthy diet difficult to do. They all knew what they should be doing, but had trouble following the healthy diet.

Subtheme Two: Exercise. Exercise went along with diet. Most knew that exercise played a large part in controlling their hypertension.

"I'm supposed to watch my diet and exercise, but honestly I'm not doing either."

"I also exercise, which is easier to do now that I'm retired."

"I exercise more. I hate doing it so I watch TV and do it then. I sort of forget that I am doing it."

"I try to get more exercise, I should do that anyways."

"Not really made any (lifestyle changes), I ate well and exercised before ok."

Overall the participants knew that exercise was beneficial to them. It was just more difficult for some than others to fit this into their life.

Subtheme Three: Medication. Most of the participants were on medication and said that they were compliant. Many of them had insurance, which helped with the cost of the medications. They knew that taking their medications on a regular basis was essential to controlling their hypertension.

"I am taking four medications, amlodipine, lisinopril, metoprolol, hydrocholorathiazide. I have insurance so this does not impact me financially. Sometimes the medications make me feel light headed and dizzy. "

"I am on lisinopril and metoprolol. These medications are pretty cheap."

"No, I am not taking medications now. I am controlling my blood pressure with diet and exercise. I am concerned that if I don't control it now it will get worse and I won't be able to afford the medications once I am retired."

"I'm taking metoprolol now. I have no problem affording it now, but it was a big strain trying to afford it without insurance. Without insurance, I worried if I was going to be able to afford the next month's medications."

Taking medication was a major part in controlling hypertension. The participants seemed to know this and did not have a problem with taking their medications, as long as they could afford it. Having insurance made the medications less costly.

Summary of Findings

Interviews were conducted face-to-face or over the phone. The interviews lasted between 30 and 60 minutes. The interviews were conducted during the months of January 2011 through March 2011. Snowball sampling was used, therefore giving the researcher participants from a variety of clinics. A total of 12 participants, both male and female, over 18 years old, agreed to participate. All the interviews were recorded and then transcribed verbatim. The data were examined for themes that described patients' perceptions of their hypertension treatment.

Chapter V

Summary, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the patients' perceptions of their hypertension treatment. The perceptions of the participants' hypertension treatments will be discussed in this chapter. It also includes a brief summary of the conclusions based on the results of the study. Implications for practice along with recommendations for further research are provided.

Summary of the Findings

Three themes were identified. In the first theme, *no clue*, many of the participants were unaware that they had hypertension at the time of diagnosis. It was usually diagnosed while the patient was seeing the doctor for another reason. Early detection and adequate treatment of hypertension improve prognosis and may contribute to cost containment for health care providers. The finding of lack of awareness of hypertension in this study was also noted in other studies. Researchers noted the first barrier is that nearly one half of hypertensive persons are unaware of their condition (Pereira & Azevedo, 2008). If hypertension is found early, it may be treated with lifestyle modifications instead of costly medications. Also, hypertension can lead to other health problems that can be costly to treat; this could be avoided if hypertension is found early. The relationship between blood pressure and the risk of cardiovascular disease is continuous, consistent, and independent of other risk factors. Hypertension is also a

major risk factor for heart failure, peripheral arterial disease, stroke, and kidney disease (Pereira & Azevedo, 2008).

The second theme was *limited understanding*. There was a limited understanding of hypertension among the participants. Most could not give a definition of hypertension. All knew that hypertension had to do with the heart but they could give a clear definition.

The first subtheme of limited understanding was *consequences.* There was an awareness among the participants that hypertension could cause damage to the body if not controlled. Extensive evidence has demonstrated that effective control of blood pressure reduces the risk of cardiovascular events in patients with hypertension (Elliott, 2009).

The second subtheme under limited understanding was *disease knowledge*. Although many of the participants understood that uncontrolled hypertension could cause damage to the body; almost all had difficulty giving an explanation of how it would cause the damage. Many could not remember what information the provider gave to them at the time of diagnosis regarding hypertension pathophysiolgy. Delivering information in small amounts and checking the patient's comprehension before moving on is an important skill in aiding understanding and assisting patients to remember information accurately (Birks, 2009).

The third theme was *partial accountability*. Participants had partial accountability. Overall, they felt that they understood that hypertension affected their health if not controlled. Almost all of the participants took their medication as prescribed. The study showed that there was an understanding that lifestyle modifications, such as diet and exercise, would also help control blood pressure. Most participants seemed to struggle with changing their diet and increasing their exercise.

The first subtheme for partial accountability was *diet*. It was difficult for some patients to adhere to the recommended diet that their provider had instructed them to follow. Even with the knowledge that the diet would help lower their blood pressure, many did not want to follow it. Some felt that just taking medications was enough.

The second subtheme for partial accountability was *exercise.* Some of the participants found that this was a challenge to do on a regular basis. Others did find a way to include this into their daily life. Overall, most knew that they should be exercising on a regular basis.

The third subtheme for partial accountability was *medication.* The participants almost all adhered to their medication regimen. This did not seem as daunting to do on a daily basis compared to lifestyle modifications. The participants seemed to understand that taking the medication on a daily basis was important to controlling blood pressure.

A qualitative descriptive approach was used to discuss and describe patients' perspectives on their hypertensive treatment. The population of this study was hypertensive patients, age 18 years and older, that lived in a Midwestern city. The study consisted of a convenience sample of 12 people. Open-ended questions were asked of each participant in face-to-face interviews. The interviews were conducted at a place of the participants' choice. The researcher audio-taped the interviews.

Giorgio's method was used to analyze the data. The participants' answers were reviewed and analyzed for an overall meaning. Themes and subthemes were formulated from the meanings. Three themes were found – no clue, limited understanding, and partial accountability.

Theoretical framework chosen to guide this study was the health belief model. The health belief model (Polit & Beck, 2008) is a conceptual model that focuses on

explaining health-promoting behaviors, using wellness orientation (Polit & Beck, 2008). The model is comprised of the person's perception of susceptibility to the disease, the perceived threat of contracting the disease, the perceived severity of the disease, the perceived benefits of preventative measures, and the perceived interpersonal and situational influences that result in health promotion behavior.

Conclusion

Limited understanding. There is not a clear understanding of what hypertension is. Most participants could not give a definition of hypertension. They could not clearly articulate what hypertension was. It was unclear with most participants if their provider discussed what it was.

No clue. Hypertension usually does not have symptoms, so someone may not realize that they have it. Hypertension is the silent killer many have no idea they have it. In this study, most were diagnosed with hypertension at an appointment they had made with the provider for another reason.

Partial accountability. Lifestyle modifications, such as diet and exercise, will help control blood pressure. Lifestyle modifications seemed difficult for some participants, even though this is a very important part of controlling blood pressure.

Most people are aware uncontrolled hypertension can have a negative impact on a person's health. Although the participants could not give a clear definition of hypertension, many knew that it can cause damage to the body if not controlled. The mechanism behind how hypertension does this to the body eluded the participants. This was also the finding from a study by Elliott (2009), who found that patients have a poor understanding or may lack awareness of the long-term consequences of elevated blood

pressure or the importance of blood pressure control, particularly because hypertension is often asymptomatic. A study by Pereira and Acevedo (2008) discussed the complex barriers that patients have controlling blood pressure and the difficulty that patients have overcoming these barriers.

Impact on Nursing

This study discovered that many patients do not have a clear understanding of hypertension. They do know that it can cause other health problems for them if it is not well controlled; although not everyone is clear on what health conditions hypertension can cause. Nurse practitioners need to spend more time on educating their patients what hypertension is and the impact it can have on a patient's life. This was also reflected in a study by Elliott (2009), which found that providers often individualize antihypertensive regiments, taking into account the degree of blood pressure elevation, concomitant conditions, absolute cardiovascular risk, and an assessment of the patient's past medication taking behavior. Having a better understanding of adherence and persistence with antihypertensive medication regimens, factors affecting each, and strategies to improve BP control rates can lower the economic burden of hypertension and its consequent cardiovascular side effects (Elliott, 2009). Reviewing this information at each visit can help a patient understand their disease and will allow the patient to ask questions regarding their disease.

Most patients in this study had difficulty making any lifestyle modifications. As nurse practitioners it is important to teach patients how these lifestyle modifications impact hypertension. The lifestyle modifications can be as important as taking medication. Stressing this to patients and teaching the patients the link between

controlled hypertension and lifestyle modifications could help a patient to adhere to a better heart healthy diet and increase exercise. According to a study by Morecroft et al. (2005), patients weigh up their own perceptions of the pros and cons of a treatment, which they may or may not disclose to their general practitioner. This study showed that it was difficult for patients to make lifestyle modifications. Nurse practitioners could help counsel patients and find out what some of the barriers are so patients can make positive changes. A study by Pereira and Azevedo (2008) found that the importance of lifestyle modifications, which play a critical role in both prevention and treatment of hypertension, ends up disregarded in everyday practice, essentially for the same reasons – time limitations and lack of close follow ups..

Implications for Future Research

Further research could include demographic information. This could help focus which gender, age, and education level has the most difficulty with lifestyle modifications, adherence to medications, or understanding the definition of hypertension. Also, research could take this a step further, asking what the barriers are to lifestyle modifications and why it is so difficult for patients to change their diet or exercise. For future research on this topic, a larger sample size would be more helpful, and the sample should not be obtained by snowball sampling.

APPENDIX A

INFORMED CONSENT

You are invited to participate in a research study conducted by Anne Janning, who is a graduate student at the University of Wisconsin Oshkosh. Anne Janning is conducting the research for her clinical paper in her nurse practitioner masters program. Dr. Judy Westphal is her chair for this study.

Your participation is entirely voluntarily in this study. Read the following before signing the consent. Please ask if you have any questions. All questions will be answered thoroughly.

Purpose of the Study

To understand the patients perceived perspectives on their hypertension treatment. To allow providers to better understand patients views on hypertensive treatments so they can provide better patient care.

Procedure

If you consent to participating in this study you will be asked to:

1. Participate in an interview for 30-45 minutes
2. Provide a list of medications that you are on for hypertension
3. Your identity will remain confidential

Possible Risks

Risks are minimal. Possible emotional discomfort from the interview may occur.

Freedom to Withdraw

At any time during the study the participant may withdraw from the study and may do so without penalty. The information that you have provided will be destroyed.

Offer to Answer Inquiries

Once the study is completed you may be provided with the results if you so desire. If you have any questions regarding the study in the meantime please contact:

Dr. Judy Westphal

Department of Nursing

University of Wisconsin Oshkosh

Telephone 1-920-424-3017 Email westphaja@uwohs.edu

Third Party Referral

If you have any concerns about your treatment as a participant in the research study please contact: Chair, Institutional Review Board for Protection of Human Participants

c/o Grants Office UW- Oshkosh

800 Algoma Boulevard

Oshkosh, WI 54901

Participant Signature ___________________

Consent to have interview tape recorded

Participant Signature ___________________

APPENDIX B

PARTICIPANT INFORMATION SHEET

Participant Information Sheet

Summary of the Research Project

Title: Patients views of Hypertension Treatments

To better understand patients' perceived perspectives on hypertension treatment. To give Nurse practitioners a better understanding of patients' views on their prescribed hypertension treatment. This will allow the nurse practitioners to understand where more patient education is needed.

1. Benefits

Help nurse practitioners understand patients' points of views on hypertension so they can provide better treatment that best fits patients with hypertension and provide improved patient education.

2. The procedure you will be involved in is a face to face interview with the researcher

3. Duration of time for participation is 30-45 minutes for the interview

4. Your participation in this study is completely voluntary. You may withdraw from the study at any time.

5. Any information you provide will be completely confidential any will not be released to anyone without your consent for purposes that are not directly related to this study.

6. If you have any questions regarding this study please contact:

Dr. Judy Westphal UW- Oshkosh telephone 1-920-424-3017

7. You will be provided of a copy of this statement, which will acknowledge the fact that you were informed about the project and voluntarily agreed to be in the study.

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