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The Experiences Of Self-Managing Perceived Blood Pressure Changes In Women With Hypertension

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**THE EXPERIENCE OF SELF-MANAGING PERCEIVED BLOOD PRESSURE
CHANGES IN WOMEN WITH HYPERTENSION**

by

MARY M. FRANKLIN

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2013

MAJOR: NURSING

Approved by:

Advisor

Date

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DEDICATION

This dissertation is dedicated to my mother, Joanne Franklin. She is and has been a trailblazer her entire life. I am the person I am today because of following her example.

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Dr. Rosalind Peters, my advisor, was instrumental in moving both me and my research forward with her keen insights, critical questions, and demands for precision. I'm a better scientist because of my time with her. Dr. Janet Harden, my supervisor and qualitative research advisor, supported me and helped me find and interpret the truth in the women's stories. Dr. Horng-Shuann Wu both challenged and supported me at many points along my journey. Dr. Antonia Abbey provided thoughtful feedback and posed key questions that made my research better.

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CHAPTER ONE-AIM OF THE STUDY

Statement of the Problem

Cardiovascular diseases such as coronary heart disease (CHD), heart failure (HF), and hypertension (HTN) are a major public health concern affecting nearly one in three adult Americans (Roger et al., 2011). Among women, the prevalence of HTN remains constant at 30% until the sixth decade of life when it spikes to nearly 75% of all women (Roger et al., 2011). Only 30% of the women with HTN and taking antihypertensive treatment have a controlled blood pressure (BP) level (less than 140/90 mm Hg) (Ong et al., 2007). Persons with CHD and HF are taught to use key symptoms such as chest pain and dyspnea as indicators to self-recognize potential changes in their health (Anderson et al., 2011; Jessup et al., 2009). Health care providers encourage and educate patients with CHD and HF to act on self-recognized changes and take action (Anderson et al., 2011; Jessup et al., 2009). Healthcare providers believe that the timely recognition of symptoms in CHD and HF is essential to assure that patients receive timely life-saving treatment (Anderson et al., 2011; Jessup et al., 2009). Symptoms are defined as “subjective phenomena regarded by the individual as an indication or characteristic of a condition departing from normal function, sensation, or appearance” (Rhodes & Watson, 1987, p. 242).

Nearly 40 million women have a diagnosis of HTN (Roger et al, 2011). The assumption that changes in blood pressure (BP) levels manifest discernible symptoms among persons with HTN is implied in existing studies. Up to 50% of participants in extant studies report experiencing hypertensive symptoms (Cantillon et al., 1997; Kjellgren et al.,1998; Middeke, Lemmer, Schaaf, & Eckes, 2008). Fifty percent of 40 million women with HTN is nearly 20 million individuals who may experience hypertensive symptoms. Clinicians and investigators

can presume with reasonable confidence that several million women with HTN experience hypertensive symptoms. What is not known is if the women experiencing hypertensive symptoms associate them with a perceptible change in their BP. An association between hypertensive symptoms (the subjective change) and BP elevations or decreases (the condition departing from normal function) may exist when considering the symptom definition of Rhodes & Watson (1987). Yet, there is no empiric evidence to support this presumption.

Clinicians and investigators may also presume that women self-manage their hypertensive symptoms. This premise is based on a few small qualitative studies of Black Africans and African Americans who altered or omitted taking their antihypertensive medications in response to experienced symptoms (Beuene, Haafkens, Schuster, & Bindels, 2006; Connell, McKevitt, & Wolfe, 2005; Lukoschek, 2003; Rose, Kim, Dennison, & Hill, 2000). Any other presumption from the qualitative study findings such as persons are acting in response to underlying perceived BP changes or undesirable antihypertensive effects rather than hypertensive symptoms are speculative in the absence of any supporting research.

In summary, two untested presumptions derived from the extant research about hypertensive symptoms and corresponding self-management behaviors form the basis of the research problem. The first presumption is that hypertensive symptoms are associated with perceived BP changes. Secondly, persons with HTN may be using self-recognized changes in their BP to guide self-management. The untested presumptions may impact millions of persons with HTN but remain speculative without empiric support.

Aim of the Study

The aim of this phenomenological research study is to describe the experiences of self-managing perceived BP changes in women with HTN. The aim of the study is formed from the

two untested implicit presumptions about persons with HTN described in the preceding paragraphs. The first presumption is that experienced hypertensive symptoms are associated with perceived BP changes. The second presumption is that women with HTN self-manage their perceptible BP changes. In the succeeding chapters, the research study is referred to as “the study”. Additionally, the author of the study is referred to in the following chapters as “the principal investigator” (PI).

Description of the Phenomenon

Two concepts, perceived BP changes and self-management, are combined to form the phenomenon of interest in the research study. A tentative definition for each concept is posited from extant research and theory. The definitions must be postulated as tentative for the purposes of the study with further refinement from study participant responses. The first concept, perceived BP changes, is implicit in reports of hypertensive symptoms in up to 50% of persons with HTN (Cantillon et al., 1997; Kjellgren et al., 1998; Middeke et al., 2008). Presently, no definition exists for perceived BP changes in existing research. A symptom is defined as a subjective phenomenon indicative of a condition that deviates from normal function, sensation, or appearance (Rhodes & Watson, 1987). When hypertensive symptoms are considered in context with Rhodes and Watson’s (1987) definition of a symptom, an underlying perceptible BP change in persons with HTN may be the condition deviating from normal function, or sensation. A tentative definition of a perceived BP change for the research study is the awareness persons with HTN have of an increase or decrease in their BP level (Awareness, n.d.). The awareness of a change in one’s BP level may be based on experienced symptoms or sensations (Wilde & Garvin, 2007).

The second concept forming the phenomenon of the research study is self-management. The term “self-management” has had varied uses in extant research. A meta-analysis of chronic disease self-management programs by Chodosh and colleagues (2005) demonstrates that the term self-management may be used in research to describe an outcome (i.e., hemoglobin A1C levels), a specific behavior (i.e., taking medication or exercise), or an intervention (i.e., education, counseling, nursing care). The PI believes that self-management is a process that is broader than and inclusive of singular outcomes, interventions, and behaviors. Therefore, the tentative definition of self-management of the study is the process persons with HTN use to control or reduce the impact of perceived BP changes on their physical health and well-being (Clark et al., 1991). The PI anticipates having the opportunity to refine this definition and identify the process elements based on participant responses.

The phenomenon of interest in the study is self-managing perceived BP changes in women with HTN. The phenomenon is defined as the process of actions undertaken by persons with HTN in response to the awareness of increases and/or decreases in their BP level (Awareness, n.d.; Clark et al., 1991; Garvin & Wilde, 2007).

Justifications for the Study

Six key justifications are advanced to support the phenomenological study of the experiences of self-managing perceived BP changes. The study justifications are: (a) there are no existing studies associating perceived BP changes with hypertensive symptoms, (b) women have a high prevalence of HTN and poor levels of BP control, (c) women consistently report more hypertensive symptoms than men, (d) a bias toward elevated BP in the extant research, (e) the unacknowledged patient perspective about hypertensive symptoms, and (f) there are no existing

studies of the self-management of perceived BP changes. Each study justification is discussed individually.

No research associating perceived BP changes with hypertensive symptoms. There are no existing studies that describe perceived BP changes as the underlying condition responsible for the reported hypertensive symptom. Hypertensive symptoms such as headaches, dizziness, flushing, dyspnea, and vision changes have been described in several quantitative studies (Cantillon et al., 1997; Chatellier et al., 1982; Kjellgren et al., 1998; Middeke, Lemmer, Schaaf, & Eckes, 2008). The presence of a condition underlying a presenting symptom is substantiated from the conceptual definition of a symptom. Rhodes and Watson (1987) contend that a symptom indicates a change in one's usual function or condition. There are no existing studies describing perceived BP elevations or decreases as the condition underlying a hypertensive symptom. The study explored if persons with HTN connect their hypertensive symptoms to a BP change.

Women have a high HTN prevalence and poor levels of BP control. Adult American women have a high prevalence of HTN and suboptimal levels of BP control. Roger and colleagues (2011) report a high prevalence of HTN for White (31.3%) and Black (45.7%) women over the age of 20 in the United States. The prevalence rates of HTN in women remain close to men until the sixth decade of life (Roger et al., 2011). After that time, the prevalence of HTN for women increases sharply to nearly 75 % of the population (compared to 65% for men) (Hall, Granger, Reckelhoff, & Sandberg, 2008; Roger et al., 2011). Low levels of controlled BP (35.2%) (less than 140/90 mm Hg) were seen among women who were receiving antihypertensive therapy (Ong, Cheung, Man, Lau, & Lam, 2007). The results of Ong and colleagues fall well below the established target goal established by Healthy People 2020 (2011)

that 61.2 % of all adults with HTN have a controlled BP level of less than 140/90 mm Hg (U.S. Department of Health and Human Services, 2011). Women with HTN are an appropriate target group for the study as they have both high disease prevalence and low levels of BP control.

Women report more hypertensive symptoms than men. In three existing studies, women reported significantly more dyspnea, headaches, dizziness, blurred vision, palpitations, and tinnitus than men (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke, Lemmer, Schaaf, & Eckes, 2008). The research findings of women reporting more hypertensive symptoms than men is consistent with what is known about women's symptom reporting behaviors (Barsky, Peekna, & Borus, 2002). Barsky and colleagues (2002) found that women consistently reported a greater number of more frequently occurring symptoms than men in samples of community-dwelling individuals, and medical inpatients. The PI believed that a sample of women possessed the requisite experiences to inform the research aim of the study.

Bias toward BP elevations in existing research. The existing hypertensive symptom research is biased toward BP elevations. There are ten extant studies describing the hypertensive or "high" BP symptoms experienced by persons with HTN (Bohlender, Waal-Manning, & Simpson, 1990; Bulpitt, Dollery, & Carne; 1974; Bulpitt, Dollery, & Carne, 1976; Bulpitt et al., 1999; Cantillon et al., 1997; Chatellier et al., 1982; Kjellgren et al., 1998; Meyer et al., 1985; Middeke et al., 2007; Schoenberg & Drew, 2002). Presently, only one qualitative study of African Americans with HTN reported the symptoms of BP decreases (Lukoschek, 2003). Many participants in Lukoschek's (2003) study who were labeled as 'non-adherent' with antihypertensive treatment felt worse and experienced dizziness and fatigue when their systolic BP levels dropped below 140 mm Hg. Lukoschek's (2003) findings may be important to BP control if persons with HTN are not taking medication to keep their BP from dropping to

personally undesirable low levels. The important implication from Lukoschek's study is that persons with HTN may be experiencing bothersome BP decreases that manifest discernible symptoms.

The unacknowledged patient perspective of hypertensive symptoms. Persons with HTN have a perspective about hypertensive symptoms that is not given sufficient credence by the biomedical community. Schoenberg and Drew (2002) interviewed six medical professionals (two nurses, a nurse practitioner, and three physicians) as part of their qualitative study about hypertensive symptoms in older African American adults. The health care providers discouraged their patients from using hypertensive symptoms to self-monitor their BP (Schoenberg & Drew, 2002). The investigators suggested that the insistence of biomedical professionals that HTN is asymptomatic discounts the key experiential knowledge that patients have of their own symptoms and bodies. In disregarding the experiences of patients and their hypertensive symptoms, providers and investigators may lose critical insights about what patients believe about their BP and why they act in particular ways. The study has a primary focus on the experiences of persons in self-managing their perceived BP changes. One outcome of the study may be new knowledge to help healthcare providers and investigators to accept rather than disregard the hypertensive symptoms of persons with HTN.

No existing studies of the self-management of perceived BP changes. A few qualitative studies describe the self-management of hypertensive symptoms. No studies address perceived underlying BP changes (Beune et al., 2006; Connell et al., 2005; Lukoschek, 2003; Meyer et al., 1985; Rose et al., 2000; Sångren et al, 2009; Schmid, Damush, Plue, Subramanian, Bakas, & Williams, 2009). Persons with HTN self-monitored their BP levels and altered how they took antihypertensive medication according to experienced hypertensive symptoms (Beune et al.,

2006; Gohar et al., 2008; Meyer et al., 1985; Rose et al., 2000; Sangren et al., 2009; Wilde & Garvin, 2007). Participants in the existing studies were not queried if they were acting in response to a perceived BP change. Findings from the study may describe a connection between perceived BP changes and self-management behaviors.

In summary, the study aims to explore the phenomenon of self-managing perceived BP changes in women with HTN. Six justifications are posited as to why the study is necessary. First, a perceived BP change as the condition underlying a hypertensive symptom has never been reported in any existing research study. Second, there is a high prevalence of American women with a diagnosis of HTN with low levels of BP control. Third, women consistently report more hypertensive symptoms than men. Fourth, the patient perspective of hypertensive symptoms has not been given voice and credence by the biomedical community. Fifth, the extant research is biased toward BP elevations. Finally, there are no existing studies of self-managing perceived BP changes.

Specific Research Context

The context is the setting or environment in which a phenomenon of interest is situated for the purposes of a research study (Munhall, 2007). The context of the research study is the community where persons with HTN live, work, and seek health care. The self-management by individuals with chronic illnesses frames the research context. Chronic illness self-management rests on the affected individual with a control-based focus to ameliorate symptoms and reduce any adverse impact to health and well-being (Bodenheimer et al., 2002; Watt, 2000). Individuals with chronic conditions make multiple repetitive self-evaluations and decisions on a daily basis (Watt, 2000). In contrast, acute illness self-management is curative in nature, more reliant on health care providers and may involve fewer evaluations and decisions (Watt, 2000).

Bodenheimer and colleagues (2002) emphasize that individuals with chronic conditions are their own primary caregiver with health care providers acting in a consultant capacity. The essence of chronic self-management of perceived BP changes is likely best captured in the community where persons with HTN live and work.

Principal Investigator Assumptions and Biases

In a phenomenological inquiry, the investigator may know too much and not be open to the true nature of the phenomenon of interest if his or her predisposing assumptions, presumptions, and biases are not acknowledged and made explicit prior to undertaking research studies (van Manen, 1990). Preexisting assumptions of the PI of relevance to the study are formed from four broad sources: (a) knowledge of cardiovascular disease, (b) her personal philosophic beliefs, (c) beliefs about the phenomenon of the study, and (d) beliefs about nursing's metaparadigm (Fawcett, 2005).

The PI's knowledge of cardiovascular disease. Cardiovascular diseases (stroke, CHD, HF) are a major public problem with both high prevalence and mortality in the United States (Roger et al., 2011). Approximately one in three Americans has a cardiovascular disease (Roger et al., 2011). Similar to the prevalence, one in three deaths among Americans is attributable to cardiovascular disease (Roger et al., 2011). A common factor in myocardial infarction, heart failure, and stroke is uncontrolled HTN (Lloyd-Jones et al., 2010). Nearly 80% of first-time MI, heart failure exacerbations, and strokes are attributable to uncontrolled HTN (Lloyd-Jones et al., 2010).

Hypertension is a vascular disease broadly characterized by multiple impairments to body water and sodium balance, neurohormonal regulation of arterial vascular tone and cardiac function (Kotchen, 2008). Controlled BP levels below 140/90 mm Hg are associated with

reductions in renal and heart failure, stroke, and myocardial infarction (Chobanian et al., 2003). The necessary keys to lowering BP levels in persons with HTN are a combination of antihypertensive medication, reduction of dietary fat, and sodium, maintaining a normal body weight, avoiding tobacco and alcohol consumption, and engaging in physical exercise (Chobanian et al., 2003). Yet, according to Healthy People 2020, less than half of all persons with HTN have their BP controlled to the level needed to reduce the occurrence of catastrophic cardiovascular diseases (U.S. Department of Health and Human Services, 2010). The suboptimal levels of controlled BP levels among persons with HTN should concern healthcare providers and researchers. The principal investigator of the study believes that what persons with HTN perceive about their BP changes impact what they do to control their BP. In turn, the control of BP has a positive antecedent effect on risk reduction in the occurrence of catastrophic cardiovascular diseases.

The PI's personal philosophic beliefs. The PI primarily ascribes to the philosophic tenets of moderate realism (Davies, 2009; Maritain, 1996; Moser, 2000; Wallace, 1996). Moderate realism is briefly described in terms of three constituent beliefs: ontology (i.e. the nature of reality), epistemology (i.e. the relationship between the knower and what can be known), and methods (i.e. how the inquirer finds knowledge) (Guba,1990; Lincoln, 1992). The explication of the philosophical beliefs of the PI at the outset of the study is necessary for two reasons. First, her philosophical position toward ontology, and epistemology frames her view of the world, and stance toward research. For example, the PI has a research interest in symptoms and perceived health changes. If she ascribed to a positivistic philosophy with an emphasis on observable phenomena, the principal investigator may not pay credence to or be interested in subjective phenomena such as symptoms and perception. Second, phenomenology itself is a philosophy

with its own tenets, and preassumptions. Caeli, Ray, and Mill (2003) do not believe that an investigator can use a qualitative methodology with a notably different philosophical beliefs from his or her own view. The PI is more likely to follow a qualitative methodology that is philosophically congruent with her own view.

Ontology in moderate realism. In moderate realism, ontology or reality is comprised of subjectively held perceptions and objective sense data (Davies, 2009; Lincoln & Guba, 1985; Maritain, 1996; Moser, 2000). Moser believes that in moderate realism, an object may exist objectively and independently of a person's subjective awareness. For example, Moser (2000) states that a person may hold a mental belief that Lake Michigan is wet. The same person will know Lake Michigan is wet being that it is a very large body of water (Moser, 2000). Lincoln and Guba (1985) suggest that both the human senses and intellect are imperfect. The consequence of humans possessing both a fallible intellect and senses is that the comprehended reality is an approximation rather than an absolute true reality (Lincoln & Guba, 1985). Two individuals could comprehend the same physical object through his or her own senses and intellect and come to different approximations of the same object or experience.

Epistemology and method in moderate realism. From an epistemological perspective within moderate realism, the nature of the relationship between the inquirer/investigator and the known occurs through the comprehension of an object through objective sense experience and/or subjectively held perceptions (Davies, 2009; Maritain, 1996; Moser, 2000). The knowledge that results from unique human senses and intellect may approach but never reach a consensus around an absolute truth. Knowledge is created when individuals with their representation of reality triangulate their different perspectives toward a consensus of an approximate truth (Phillips & Burbules, 2000; Lincoln & Guba, 1985; Trochim, 2006). An investigator working

within the moderate realist philosophy could use quantitative and/or qualitative methods to discover knowledge derived from the unique human objective sense experiences and subjective intellect and perception of his or her study participants.

Moderate realism is a common post-positivist philosophy based on commonalities at the levels of ontology, epistemology, and method. (Guba, 1990; Trochim, 2006). At the level of ontology, the shared tenet between moderate realism and post positivism is that objects can exist independently and objectively from an individual's subjective awareness (Guba, 1990; Trochim, 2006). At the level of epistemology, the moderate realist can generate knowledge interactively with participants, and accepts the assumption that human senses and intellect are unique to the individual (Guba, 1990; Lincoln & Burbules, 2000; Trochim, 2006). Finally, investigators working within moderate realism and post positivism believe that multiple data sources and qualitative and quantitative methods are necessary to triangulate and describe the object of interest (Guba, 1990; Trochim, 2006).

The PI's beliefs about the study phenomenon. The PI formed the study phenomenon, the experiences of self-managing perceived BP changes from existing concepts in research and her own clinical experience. The PI has preexisting beliefs about each concept of the study phenomenon that will be discussed individually.

Beliefs about perceived BP changes. The PI believes that hypertensive symptoms are manifestations of perceptible BP changes experienced by persons with HTN. This belief is predicated on the symptom definition of Rhodes and Watson (1987) that symptoms are subjective phenomena indicating changes in a condition that deviates from normal appearance, sensation, or function. The PI shares the beliefs of Leventhal and colleagues (2003) that humans act as common sense scientists when they perceive a change in their health. Once a perceived

change in health is experienced, the individual will assign a label, ascribe meaning, and determine the expected duration, consequences, and possible courses of action (Leventhal et al., 2003). The PI believes that persons with HTN who report symptoms have completed the process described by Leventhal and colleagues (2003). She had to hold this belief in abeyance to permit study participants an unbiased opportunity to make their experiences known.

Beliefs about self-management and the theory of self-care. The PI ascribes to the beliefs of Clark and colleagues (1991) and key concepts from Orem's (2001) theory of self-care (TSC). The PI concurs with Clark and colleagues (1991) that self-management consists of "the day-to-day tasks an individual must undertake to control or reduce the impact of disease on physical health status" (p. 5). The statement of "day-to-day tasks" suggests to the PI that self-management is a process of actions. The PI concurs with Orem's (2001) beliefs in the TSC that persons perform cognitively-focused tasks such investigation, interpretation and decision-making as well as physical activities in their process of self-management. The key concepts of Orem's (2001) TSC will be described in Chapter Two in greater detail.

The PI's beliefs about nursing's metaparadigm. The discipline of nursing has a metaparadigm that identifies the phenomena of interest and guides inquiry for nurse scientists and clinicians (Fawcett, 2005). Fawcett (2005) defines a metaparadigm as "the global concepts that identify the phenomena of central interest to a discipline, the global propositions that describe the concepts, and the global propositions that state the relationships among the concepts" (p. 4). The metaparadigm exists at the highest level of abstraction from which more concrete components such as conceptual models, theories, and empirical indicators at the lowest level of abstraction can be generated (Fawcett, 2005). The four key metaparadigm concepts specified by Fawcett (2005) include humans, health, nursing, and the environment. The PI must

explicate her specific beliefs about humans, health, the environment, and nursing to meet the challenge of Munhall (2007) who believes that investigators need to make all their preexisting beliefs and biases explicit prior to embarking on qualitative research.

Beliefs about humans. The PI has five specific beliefs about humans. First, humans are integrated beings from their respective physical, psychological, social, and cultural contexts. A person must be considered as a composite influenced by multiple contexts and is not reducible to any singular component. Secondly, the singular individual is the focal unit of clinical interest and inquiry for the PI. Thirdly, persons act as common sense scientists to actively seek, interpret and generate explanations for an experienced physical or perceived health changes. Fourth, persons with a physical or perceived health change act as rational decision-makers to weigh the benefits of performing self-management behaviors against the risk of taking no action. Finally, the PI believes that generally, individuals are deliberate beings and act with intention. The actions of individuals that appear to be irrational from the perspective of clinicians and investigators may be completely rational and intentional from the perspective of the individual.

Beliefs about the environment. The PI believes that the environment can be internal (the characteristics and conditions of the self) and external (the important others, physical surroundings, and local, national, global, social, and economic conditions and policies) and influences the health of humans. Persons monitor themselves to ascertain any changes to their usual condition or function. Humans interact with their external environment in a reciprocal fashion. The concept of environment has particular salience to perceived health changes on four levels. First, persons may perceive a change in their own health, and investigate and interpret the conditions internally. Secondly, the individual perceiving and making a judgment about an internal change turns to the external environment by consulting important others for opinions. On

a third level, patients with perceived internal health changes look for information (from their external environment to television, the internet, and social media) to guide their interpretations and actions. Healthcare professionals may act as key consultants on a fourth level in the external environment of persons perceiving changes in their health. The PI talks to many patients and/or their significant others or caregivers regularly via telephone who reside in the community and report various cardiovascular symptoms. These individuals are looking for professional assistance in determining the identity, severity, consequences, and need for treatment of their health problems. Typically, the person and/or important other turns to health care providers after exhausting other sources within his or her internal and external environment and have questions or require assistance.

Beliefs about health. The PI has four particular beliefs about health that are relevant to the study. First, health represents a person's state of usual physical, psychological, emotional, and social functioning from that individual's viewpoint and definition. Secondly as the individual defines his or her own state of health, healthcare providers use established standards and criteria to judge the health of their patients. The example of an external standard is the controlled BP level criterion of less than 140/90 mm Hg (Chobanian et al., 2003). Patients may think their BP level is good or healthy but providers may be dissatisfied with the result. Thirdly, changes in health can be both perceived (subjectively experienced and unique to the individual) and/or observable in physical, emotional, psychological, emotional, and social functioning. Fourth, the research and clinical interests of the PI relative to health focuses on the perceived and observable physical health changes of persons with cardiovascular illness. The PI's research focus for the study is inclined to the perceived deviations from usual health and how individuals behave to improve their health through self-management.

Beliefs about nursing. The PI believes that the goal of nursing is to assess and manage the human responses to perceived, actual, or potential illness. Human responses are inclusive of the physical, psychological, and social domains of the individual. Nurses function in three ways to protect, promote, and optimize the health of patients. First, nurses may intervene directly in situations when persons have actual physical health problems. The PI often functions in this capacity in her work with acutely ill cardiovascular patients who have life threatening problems. Secondly, nurses may act in a supportive-educative capacity when persons need consultation and/or education to manage their own actual, potential, or perceived health problems. Third, the PI has a strong interest in perceived health problems and believes that nurses have the responsibility to learn the motivations and intentions of their patients' decisions and actions. The rational decisions and actions of a patient may be labeled as "noncompliant" by medical professionals if it deviates from usual professional healthcare standards. Nurse clinicians and investigators work from a base of research and clinical practice standards intended to optimize positive health outcomes. The nurse may recognize or encounter a difference in a patient's judgment or decision making from known professional standards that could lead to a suboptimal health outcome. The nurse assists patients in their judgment and decision making to come to the most optimal health outcomes. Nurse support may come in the form of supplying information and replacing inaccurate judgments with new ones. Patients may still make decisions and hold judgments that remain personally rational to them but may lead to suboptimal outcomes after nurse intervention.

Underlying Beliefs and Assumptions of the Principal Investigator

The following statements are a summary of the PI's beliefs about HTN, philosophy, the study phenomenon, humans, health, the environment, and nursing:

1. Controlling BP levels may reduce cardiovascular disease risk.
2. Humans possess their own unique view of reality formed from their own senses, intellect, and personal experience. No two individuals will represent the same object or event to themselves in an identical fashion.
3. There is no single absolutely true reality as humans possess their own views of reality.
4. Knowledge is derived from combining the unique realities of individuals around an object, event, or experience and moving toward consensus.
5. Both qualitative and/or quantitative methods are needed to develop knowledge.
6. Reported hypertensive symptoms are manifestations of perceptible BP changes.
7. Persons with HTN use perceptible BP changes to guide self-management.
8. Self-management is a process comprised of day-to-day cognitive/perceptual and physical tasks performed by individuals to control or reduce the impact of HTN on their health.
9. Humans are integrated physical, psychological, and social beings.
10. Humans are deliberate beings and act with intention.
11. The internal environment refers to the inner conditions and characteristics of the individual.
12. The external environment refers to: important others, immediate physical surroundings, local, regional, national global, social, economic, and political world of an individual.
13. Humans interact with their environment in a reciprocal fashion.
14. Changes in an individual's health can be actual, potential, or perceived.
15. Humans may make personally rational judgments and decisions about their health.
16. The rational choices individuals make about their health may or may not be congruent with the recommendations of their providers.

17. Nurses intervene with patients to assist them to meet their perceived, potential, or actual health needs.

18. Nursing intervention is based on established evidence and/or professional standards.

Research Study Methodology, Method and Justification

The study employed van Manen's (1990) philosophy and method of phenomenology to describe the experiences in self-managing perceived BP changes by persons with HTN. Phenomenology is an example of a human science, a research tradition that emphasizes meaning, understanding, and interpretation of the phenomena of interest (Munhall, 2007). The phenomena of interest to a human science investigator are subjective in nature and not measurable or quantifiable by positivistic methods (Langdridge, 2004).

van Manen's phenomenology as a human science. van Manen's (1990) phenomenology is an example of a human science methodology. He believes that phenomenologists are interested in studying how people experience their world (van Manen, 2002). The experiences of individuals "may be anything that presents itself to human consciousness...real or imagined, empirically observable or subjectively felt" (van Manen, 1990, p. 9). The objects of study from van Manen's phenomenology are primarily subjective experiences that reside in human consciousness but are inclusive of observable entities. The goal of van Manen's philosophy and method (1990) is to make the implicit experiences of persons explicit through an iterative process between investigators and participants involving reflection, interaction, interpretation, and writing. The PI believes that van Manen's (1990) phenomenology is congruent with a post positivist perspective. van Manen (1990) believes that any phenomena under study can be real or imagined, subjectively felt or empirically measured. His beliefs are consistent with post positivism in that objects presenting themselves to consciousness may be experienced through

the senses and/or subjectively constructed. The PI discussed the philosophic assumptions in greater detail in Chapter Three.

van Manen's six-step research method. van Manen (1990) articulated a six-step series of procedures to assist investigators in conducting phenomenologic inquiries. The six steps of van Manen's (1990) research method includes: (a) turning to a phenomenon of interest, (b) investigating experience as it is lived rather than theorized or conceptualized, (c) reflecting on essential themes, (d) representing the phenomenon through the writing, and rewriting, (e) maintaining a strong and oriented relation to the phenomenon, and (f) balancing the research context between the parts and the whole. The steps of van Manen's (1990) method are described in detail in Chapter Three.

Justifications for using van Manen's phenomenology. Two justifications are offered to support the choice of van Manen's (1990) phenomenology in the study. The justifications are based on congruence between van Manen's (1990) beliefs and: (a) the nature of the study phenomenon, and (b) the PI's beliefs about the primacy of interpretation and meaning in perceived health changes. Each study justification is described in detail.

Nature of the study phenomenon. The nature of the phenomenon of the study is well suited to van Manen's (1990) phenomenology. The PI believes that the study phenomenon may be strongly oriented to cognitively-focused activities with the inclusion of perception of BP changes and the inclusion of perceptual and intellectual self-management tasks such as interpretation, judgment, and decision-making. van Manen (1990) contends that his philosophy can accommodate phenomena that are subjective and/or objective in nature. van Manen's (1990) methodology would likely accommodate any subjective and/or objective elements of the study

phenomenon. The constituent elements of the study phenomena will not be completely known until the study is completed.

Common beliefs on interpretation. Both van Manen (1990) and the PI share a belief that persons immediately interpret and assign meaning to objects and experiences appearing to human consciousness. This shared belief is applicable to perceived health changes. The PI believes that humans immediately interpret and assign meaning to any observations or sensations indicative of a perceived health change experienced through their senses and/or the intellect. van Manen (1990) contends that individuals interpret any experienced phenomena presented to human consciousness. van Manen's beliefs are reflected in his comments about participants providing post-reflective, interpreted views of their experiences to investigators. van Manen's philosophy and method rely heavily on interpretation from the participant and the investigator. The PI believes that van Manen's philosophy and method with the emphasis on individual interpretation are congruent with her personal beliefs about the interpretive activities of individuals relative to their perceived health. This congruence makes van Manen's philosophy and method an appropriate choice for the study.

In summary, van Manen's (1990) phenomenologic philosophy and method are a logical choice to conduct the study. Congruence exists between van Manen's (1990) and the PI in terms of the apparent perceptual-cognitive nature of the phenomenon, and interpretive activities undertaken by individuals.

Relevance to the Discipline of Nursing

The potential outcomes of the study have relevance to the discipline of nursing. The discipline of nursing is inclusive of professional practitioners who use prescriptive ("how to do") theories and academicians who develop the descriptive ("to know") theories (Donaldson &

Crowley, 1978). The potential outcomes of the study are discussed in terms of contributions to descriptive and prescriptive theory-building needed by the discipline of nursing.

Descriptive theory-building. The outcomes of the study have the potential to confirm and extend key concepts in Orem's (2001) theory of self-care (TSC), one of three constituent theories in her self-care deficit theory for nursing (SCDNT). A central concept of Orem's (2001) in the TSC is self-care operations, a concept asserting that individuals investigate their internal conditions, assign meaning, make and judgments and decisions, and make physical and cognitive preparations in the process of producing self-care. The commonly used Orem-based research instruments such as the appraisal of self-care agency scale and the exercise of self-care agency measure focus on the physical and cognitive preparation and production of self-care (Evers, Isenberg, Philipsen, Senten, & Brouns, 1993; Kearney & Fletcher, 1979). There are no research instruments that verify Orem's (2001) theoretical assertions that internal investigation, interpretation and assignment of meaning, and decision making and judgment are part of self-care. In the study, the principal investigator queried participants about their experiences self-investigating, interpreting, and making judgments and decisions about their perceived BP changes. The outcomes of the study may add needed knowledge about the cognitively-focused components of self-care. The results of the study may permit the extension or revision of Orem's TSC and/ or foster the development of a new self-care theory.

Prescriptive theory-building. The outcomes of the study may provide foundational knowledge for further study and research toward prescriptive theory-building in persons with HTN. Providers need to assess their hypertensive patients about perceptions about BP changes and associated self-management. The study may also provide foundational knowledge leading to new theories and studies prescribing interventions that improve medication adherence, a known

problem among persons with HTN. Persons with HTN alter their antihypertensive medication-taking patterns in response to the presence or absence of antihypertensive symptoms (Beune et al., 2006; Connell et al., 2005; Lukoschek, 2003; Rose et al., 2000). Ruppap (2010) suggests that suboptimal medication adherence is a critical impediment for successful chronic disease management and calls for more theory-driven interventions. The study may provide necessary knowledge to meet Ruppap's challenge by explicating relationships between perceived BP changes and taking antihypertensive medications. In summary, the outcomes of the study may benefit the discipline of nursing in terms of advancing self-care theory and prescribing components of assessment, self-management, and medication adherence in persons with HTN. From a research perspective, the study advances the current research priorities of the National Institute of Nursing Research (NINR) (2011). The NINR recently set forth a research priority to develop strategies to improve the management of symptoms of chronic illness. The study seeks to generate an improved understanding of the subjective changes represented by hypertensive symptoms and the resulting self-management strategies employed by persons with HTN. The experiences of persons who self-manage perceived BP changes, represented by symptoms, have not been described in any prior research study

CHAPTER TWO-EVOLUTION OF THE STUDY

Hypertensive symptoms have received research attention from physicians and psychologists for over 80 years (Ohler, 1929). The phenomenon of the study developed beyond hypertensive symptoms to its current form when the PI considered the extant research in conjunction with key concepts from symptom and self-care theories. The evolution of the study is discussed from a historical context and an experiential evolutionary perspective to illustrate how the PI formed the phenomenon of the study to hypertensive symptoms.

Rationales for the Justifications for the Study

The rationales underlying the six study justifications advanced in Chapter One is a necessary initial step in describing the evolution of the study. The six study justifications are (a) no existing studies associating perceived BP changes with hypertensive symptoms, (b) women have a high prevalence of HTN with poor levels of control, (c) women report more hypertensive symptoms than men, (d) a bias toward elevated BP in the extant research, (e) the unacknowledged patient perspective about hypertensive symptoms, and (f) no existing studies of the self-management of perceived BP changes. The rationale underlying each study justification is discussed individually.

Presumed relationships between perceived BP changes and symptoms. Any relationship between hypertensive symptoms and perceived BP changes is an unproven presumption. The PI has spent many years studying different symptom theories. A common relationship is postulated to exist between the experienced symptom and a corresponding change in disease and/or physical and mental condition (Humphreys et al., 2008; Lenz & Pugh, 2008; Rhodes & Watson, 1987). The PI presumes that perceptible BP changes are manifested by the

hypertensive symptoms experienced by persons with HTN. She presumes that this relationship exists from the theoretical association postulated in the extant symptom theories. The phenomenon of the study was developed presuming a relationship between hypertensive symptoms and perceived BP changes. This presumption remains speculative in the absence of empiric support.

Women have a high prevalence of HTN with poor levels of control. There is a need for more research in women with HTN. Over 30% of women in the U.S. have HTN (Roger et al., 2011). Of those women with HTN who are receiving antihypertensive treatment, approximately one-third has a controlled BP level of less than 140/90 mm Hg (Ong et al., 2007). Women are exposed to major catastrophic cardiovascular diseases from a combination of a high prevalence of HTN and poor levels of BP control. Poorly controlled HTN is associated with over 70% of first time myocardial infarctions, strokes and episodes of HF (Lloyd-Jones et al., 2010). The PI hopes that the results of the study may yield new knowledge that could benefit women with HTN and ultimately improve BP control.

Women report more hypertensive symptoms than men. Women with HTN consistently report more hypertensive symptoms than men (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008). There are two rationales for using women as the target sample of the study. First, women may have more perceived BP changes if they experience more hypertensive symptoms. Secondly, women may employ more self-management strategies if they experience more hypertensive symptoms. The second premise of women with HTN engaging in more self-management has been demonstrated in extant research. Women were more likely than men to engage in recommended BP-reducing activities such as going on a diet, reducing dietary sodium, and engaging in exercise (Valderrama, Tong, Ayala, & Keenan, 2010). These rationales

are presumptive in the absence of any empiric support. The results of the study may inform the PI's presumptions about women's perceived BP changes and any self-management.

An inherent bias toward only BP elevations. Hypertensive symptoms are typically equated only with BP elevations in existing research. Participants in several published studies of hypertensive symptoms had an SBP equal to or greater than 140 mm Hg and a DBP equal to or greater than 90 mm Hg (Chatellier et al., 1982; Dijkstra, Okken, Niemeijer, & Cleophas, 2008; Kjellgren et al., 1998; Middeke et al., 2008). The participants in the existing studies were never queried if any of their symptoms represented low BP changes. Lukoschek (2003) found that some hypertensive participants in her qualitative study experienced bothersome BP decreases and felt worse if their BP dropped below 140/90 mm Hg. It is not known if participants in the existing hypertensive symptom studies experienced any BP decreases as the investigators did not make any queries. The investigators of the published studies may have presumed that hypertension symptoms are equatable with BP elevations. The lack of description of BP decreases in existing research is problematic for persons with HTN, clinicians, and investigators. If persons with HTN are not taking antihypertensive medication to keep their BP above 140/90 mm Hg, they will not meet prescribed BP targets. Clinicians and investigators may not know to ask their patients/participants about experienced BP decreases. Participants in the study were queried about their BP increases and decreases to describe the spectrum of experienced BP changes.

The unacknowledged patient perspective about hypertensive symptoms. The perspective of patients that HTN is a symptomatic condition is not given credence by many medical professionals. A common perspective of medical professionals is that HTN is an asymptomatic condition. This perspective is demonstrated in common medical reference texts

and evidence-based management guidelines that HTN is asymptomatic and patients can only monitor their changes with objective measurement (Chobanian et al., 2003; Kotchen, 2008; Schoenberg & Drew, 2002). Physician participants in Schoenberg and Drew's (2002) study acknowledge that their patients have strongly held beliefs about hypertension being a symptomatic illness. The physicians in Schoenberg and Drew's (2002) study do not reinforce or acknowledge their patients' hypertensive symptoms because of a lack of evidence. The perspective of patients experiencing hypertensive symptoms may not be acknowledged by medical professionals without additional research. Results from the study may demonstrate that patients with HTN have a perspective of hypertensive symptoms that should be acknowledged by medical professionals.

No research of the self-management of perceived BP changes. There are no existing studies that describe the self-management of perceived BP changes. Participants in a few qualitative studies describe self-managing their hypertensive symptoms (Beune et al., 2006; Connell et al., 2005; Lukoschek, 2003; Meyer et al., 1985; Rose et al., 2000; Sångren et al., 2009; Schmid et al., 2009). The PI believes that the participants in the qualitative studies may have acted in response to an underlying BP change rather than the symptom itself. The presumption of the PI is speculative and relies on another untested presumption that hypertensive symptoms are associated with a perceptible BP change. Both untested presumptions form the foundation of the study.

The underlying rationales of six justifications study are described as the initial step of the evolution of the study. The underlying rationales have a common focus on patient perceptions relative to hypertensive symptoms, perceived BP changes, and self-management. Nurse investigators may have a pivotal role in advancing the importance and salience of patient

perception in BP control. The study follows the recommendations of Lorig and Holman (2003) by addressing a patient-perceived problem that has only received scant research attention. The future direction for improving BP control may lie in the inclusion of women's perceptions about their BP changes in HTN management. The necessary evidence will likely come from the work of nurse investigators who view the meanings persons assign to health and illness as salient phenomena of research attention.

Historical Context of the Study

Hypertensive symptoms, a presumed result of perceived BP changes, have attracted the research attention of physicians, and psychologists, for over 80 years (Meyer et al. 1985; Ohler, 1927; Schoenberg & Drew, 2002). The research focus of each discipline relative to hypertensive symptoms ranges from proposing pathophysiologic mechanisms of HTN in early medical literature to exploring the meanings individuals attach to their HTN (Meyer et al., 1985.; Ohler, 1927; Schoenberg & Drew, 2002). The historical overview of the study is organized according to the following disciplines: medicine, psychology, and nursing.

The Medical Perspective of Hypertensive Symptoms

Hypertensive symptoms received a notable amount of research attention from medical investigators for over 80 years (Ohler, 1927). Four notable premises emerged from the existing research: (a) a high prevalence of study participants reporting hypertensive symptoms, (b) consistent reporting of specific hypertensive symptoms, (c) an inconsistent association of symptoms to BP levels, and (d) the medical perspective that HTN is an asymptomatic condition (Beuene et al., 2006; Cantillon et al., 1997; Chatellier et al., 1982; Connell et al., 2005; Dijkstra et al., 2008; Kjellgren et al., 1998; Kottke et al., 1979; Lukoschek, 2003; Meyer et al., 1985; Rose et al., 2000).

The earliest descriptions of hypertensive symptoms occurred in conjunction with posited pathophysiologic mechanisms (Ohler, 1927). Ohler (1927) noted that nervousness, flushing, dizziness, rapid heart rates, and fatigue accompanied episodes of intermittent HTN. Ohler's early observations are consistent with pathophysiologic mechanisms later by Heilpern (2008) regarding the cardiovascular and neurologic effects of HTN. Heilpern suggests that the autonomic BP control mechanisms that regulate constriction or dilation of blood vessels to the brain are impaired in HTN, resulting in inappropriate increases or decreases in cerebral blood flow. The impairments in cerebral blood flow are hypothesized to cause neurologic symptoms such as dizziness, headaches, weakness, and visual disturbances (Heilpern, 2008). Cardiovascular impairments that occur as a result of HTN include cardiac enlargement, and increased heart rate (Heilpern, 2008). The pathophysiologic mechanisms of HTN by Heilpern are a feasible explanation for the resulting hypertensive symptoms described by Ohler. The early anecdotal descriptions of hypertensive symptoms by Ohler may have prompted medical investigators to conduct the quantitative studies of the types and prevalence of hypertensive symptoms through the 1990s.

Consistently high prevalence of hypertensive symptoms. Up to 50% of study participants in several quantitative studies reported experiencing hypertensive symptoms (Bulpitt et al., 1976; Cantillon et al., 1997; Chatellier et al., 1982; Kjellgren et al., 1998; Kottke et al., 1979; Middeke et al., 2008). The notable trend in the existing studies is the high prevalence of symptoms attributable to HTN reported by study participants over 30 years of research. This trend remained consistent in an unpublished pilot study conducted by the principal investigator and colleagues in which 26 of 51 (51%) African Americans participants reported experiencing hypertensive symptoms (Franklin, Allen, Pickett, & Peters, 2010). If the empiric trend of 50% of

persons with HTN reporting symptoms were applied to all American adults with HTN, nearly 38 million persons may have hypertensive symptoms (Roger et al., 2011).

Consistent trends of reported hypertensive symptom types. The most commonly reported symptoms associated with HTN included headaches, dizziness, blurred vision, fatigue, flushing, and dyspnea, feeling hot, sweating, and palpitations (Cantillon et al., 1997; Chatellier et al., 1982; Kjellgren et al., 1998; Kottke et al., 1979; Meyer et al., 1985; Middeke et al., 2008). A consistent trend in the common types of symptoms reported by persons with HTN appears in over 30 years of quantitative studies. The most notable contribution of medical investigators in the study of hypertensive symptoms is the description of symptom types. There are no existing longitudinal studies that empirically confirm the trends of high symptom prevalence and common symptom type.

Inconsistent associations between hypertensive symptoms and BP levels. Only two quantitative studies examined the associations between hypertensive symptom types and systolic and diastolic BP levels and reported inconsistent results (Chatellier et al., 1982; Middeke et al., 2008). Chatellier and colleagues (1982) examined the associations between symptoms and BP in 1772 adult participants with systolic blood pressure (SBP) greater or equal to 160 mm Hg and diastolic BP (DBP) greater or equal to 95 mm Hg. Among men, the frequency of dyspnea and nocturia increased with BP levels (Chatellier et al., 1982). In female participants, tinnitus, insomnia, and nocturia increased with SBP while headaches and insomnia increased with DBP (Chatellier et al., 1982). Middeke and colleagues (2008) obtained different findings in a cross-sectional study of over 52,000 adults with HTN both on and off antihypertensive therapy. The investigators found strongly positive associations ($r > 0.70$) between dizziness and headaches and both SBP and DBP increases among all participants with HTN (Middeke et al., 2008.). The

dyspnea, insomnia, nocturia and tinnitus, cardinal symptoms of elevated BP found by Chatellier and colleagues (1982) differed markedly from the headaches and dizziness found by Middeke and et al. (2008). The findings of Middeke and colleagues (2008) are noteworthy due to the large sample size. However, the differences in findings between the studies may be due to participant characteristics, differences in methods of symptom measurement, definitions of HTN, and types of antihypertensive therapy. A definitive set of symptoms that indicate actual BP changes cannot be identified in the presence of inconsistent associations. The inability to identify and associate a symptom or a set of symptoms to elevated BP may be one explanation for the continued belief that HTN is an asymptomatic condition (Chobanian et al., 2003).

Medical views of HTN as an asymptomatic condition. Hypertension continues to be viewed by medical professionals as an asymptomatic condition. The current medical viewpoints of HTN as asymptomatic are represented in current medical textbooks and clinical practice guidelines (Chobanian et al., 2003; Kotchen, 2008). The existence of the current biomedical viewpoint in 30 years of published hypertensive symptom reports is disturbing to the PI of the study. One explanation offered for the medical viewpoint in existing reports is that there are no symptoms that reliably represent BP changes (Schoenberg & Drew, 2002). Chatellier et al. (1982) and Middeke et al. (2008) found in their studies that completely different sets of symptoms were associated with BP changes and support the explanation of Schoenberg and Drew (2002). The PI of the study presumes that the study results may show a relationship between perceived BP changes and hypertensive symptoms. The study phenomenon was conceptualized to discover if participants use their perceived BP changes to guide self-management. Lorig and Holman (2003) contend that patient self-management is based on patient perceived problems. As the PI ascribes to the beliefs of Lorig & Holman (2003), any relationship

between perceived BP changes and self-management may have greater salience to improving BP control than any observable relationships between hypertensive symptoms and BP levels.

In summary, medical investigators demonstrated a consistent trend in the prevalence and types of reported hypertensive symptoms over nearly 30 years of research. A set of symptoms indicative of actual BP changes did not emerge from the extant research (Chatellier et al., 1982; Middeke et al., 2008). Medical professionals continue to ascribe to and perpetuate the belief that HTN is an asymptomatic condition in the presence of contradictory patient reports.

Psychological Perspectives of Hypertensive Symptoms

Leading social psychologists studied hypertensive symptoms as a perceived health threat (Leventhal, Meyer, & Nerenz, 1980; Leventhal & Nerenz, 1985; Leventhal et al., 2003). Leventhal and colleagues (2003) believed that a perceptible health threat triggered a multidimensional cognitive representation to handle perceived danger and an emotional representation to manage associated fear. The dimensions of the cognitive representations that comprise the common sense model for illness (CSM) include: (a) identity or labeling the threat, (b) perceived duration (acute, cyclical, or chronic), (c) perceived consequences, (d) attributable causes, and (e) controllability through personal or professional action (Leventhal et al., 2003).

Individuals with HTN self-monitored themselves for changes in their BP according to their experienced symptoms in two studies (Cantillon et al., 1997; Meyer et al., 1985). Self-monitoring is a cognitively-focused activity during which individuals are aware of changes in their physical status or condition based on experienced symptoms and/or sensations (Wilde & Garvin, 2007). The participants in both studies self-monitored their BP levels according to symptoms and believed they can detect or predict changes by what and how they feel (Cantillon et al., 1997; Meyer et al., 1985). There is an implicit assumption in both studies that persons with

HTN subjectively monitor themselves in response to a perceived health threat after their diagnosis. The CSM as articulated by Leventhal and colleagues (2003) is predicated on the beliefs that fear messages and health threats motivate persons to take action. The investigators of the quantitative studies did not explicitly test if persons with HTN who perceive BP changes experienced any specific threat.

In several qualitative studies, other psychologists suggested a possible link between hypertensive symptoms and antihypertensive medication-taking behaviors in several qualitative studies (Beune et al., 2006; Connell et al., 2005; Lukoschek, 2003; Rose et al., 2000; Schmid et al., 2009). In a study of 28 persons with HTN following a stroke or transient ischemic attack, Schmid and colleagues (2009) found that many participants relied on bodily sensations and symptoms to guide health-care seeking or taking medication. In four qualitative studies of Black Africans or African Americans, participants altered or omitted their antihypertensive medication-taking in response to experienced symptoms (Beuene et al., 2006; Connell et al., 2005; Lukoschek, 2003; Rose et al., 2000). The study results infer that participants with HTN may use perceived BP changes as manifested through their experienced symptoms as guides to taking their antihypertensive medication. This inference has not been directly tested in any extant research study to date.

Theoretical Nursing Perspectives of Hypertensive Symptoms and Self-Care

The nursing perspective of the historical context of the study is theoretical in nature and based on concepts from symptom and self-care theories (Orem, 2001; Rhodes & Watson, 1987). The PI turned to concepts from symptom and self-care theories to consider how persons with HTN perceived and managed their hypertensive symptoms. The result of the PI's contemplation is the articulation of the phenomenon of the study, the self-management of perceived BP

changes. Two key concepts, a definition of symptoms and self-care operations is described individually (Orem, 2001; Rhodes & Watson, 1987).

The definition of symptoms. The PI used a definition of Rhodes and Watson (1987) as a context to consider the results of extant hypertensive symptom studies. Rhodes and Watson (1987) defined a symptom as “a subjective phenomenon regarded by the individual as an indication or characteristic of a condition departing from normal function, sensation, or appearance” (p. 242). The PI was initially guided by the theory of unpleasant symptoms in her initial thinking about hypertensive symptoms (Lenz & Pugh, 2008). Lenz and Pugh (2008) postulated a definition of symptoms as “perceived indicators of change in normal functioning as experienced by patients” (p.184). Lenz and Pugh (2008) adapted their definition from Watson and Rhodes’ earlier version (1987) and omitted any statements of connections between symptoms and an underlying condition. The omission of connections between symptoms and an underlying condition by Lenz and Pugh in their symptom definition is problematic for the PI. Lenz and Pugh’s symptom definition could be interpreted as a perceived change in usual physical, cognitive, social, psychological function rather than an underlying condition. The symptom definition of Rhodes and Watson is more appropriate for use in the study as it provides conceptual support for postulating a connection between hypertensive symptoms and underlying perceptible BP changes.

The theory of self-care. The PI used concepts from Orem’s (2001) theory of self-care (TSC) to guide her thinking about the phenomenon of the study. The principal investigator considered that persons with HTN experiencing hypertensive symptoms and subsequently altered their medication-taking behaviors may be acting in response to perceived BP changes (Beuene et al., 2006; Connell et al., 2005; Lukoschek, 2003; Rose et al., 2000). Orem (2001) postulated a

conceptual framework for nurses to guide the study of how persons care for themselves to meet their perceived or actual health care needs. Nurses function within this framework along a continuum from direct intervention to support and education (Orem, 2001). One of the constituent theories in Orem's (2001) conceptual model is the theory of self-care (TSC). A principal assumption held within the TSC is that humans are deliberate beings and act with intention to meet their own perceived or actual health deficits (Orem, 2001). Orem (1987) believed that deliberate human action is based on the performance of self-care operations, a central concept within the TSC. Self-care operations consist of: (a) estimative (e.g. investigation, interpretation, reflection on the conditions requiring self-care), (b) transitional (e.g., decisions about courses of action), and (c) productive (e.g., preparation, performance, and evaluation of self-care actions) phases (Orem, 1987). Orem's (2001) concept of self-care operations illustrates a process of perpetual-cognitive and/or physical practices used by persons to meet their health needs. The PI believed that persons with HTN apply a process of self-management in response to the perceived BP changes that manifest themselves as hypertensive symptoms.

In summary, the nursing perspective of the study is represented conceptually in the form of two concepts, symptoms, and self-care operations (Orem, 2001; Rhodes & Watson, 1987). Rhodes and Watson's (1987) of symptoms provided the conceptual support for a possible connection between hypertensive symptoms and perceived BP changes. Orem's (2001) concept of self-care operations conceptually supported the notion of a process of perceptual-cognitive and physical practices that persons with HTN may employ to self-manage their perceived BP changes. The PI would not have been able to identify and articulate the phenomenon of the study without key concepts from nurse investigators.

In summary, the historical context for the study is formed from extant evidence from medicine and psychology, and conceptual perspectives from nursing. The outcome of applying two key concepts from nursing theory, namely symptoms and self-care operations to the existing evidence is the phenomenon of the study, the self-management of perceived BP changes (Orem, 2001; Rhodes & Watson, 1987).

Experiential Context of the Study

The study evolved from an initial interest of the PI in acute cardiovascular symptoms to the self-management of perceived BP changes with women with HTN. The intent of the following section is to describe the evolution of the phenomenon of interest from the clinical and scholarly experiences of the PI. The PI is a cardiovascular acute care nurse practitioner (NP) with over 20 years of clinical experience.

Clinical Experience of the Principal Investigator

Cardiovascular patients seeking acute treatment from an NP provide subjective data in the form of a health history. Bickley (1999) contends that the health history is a highly structured conversation with the express purpose to obtain the patient's "story" and formulate hypotheses about the presenting problem. The health history is structured to elicit essential characteristics (location, onset, timing, severity, quality, aggravating and relieving factors, associated symptoms) of the presenting problem (Bickley, 1999).

While routinely obtaining the health histories of patients with unstable angina, chest pain, and heart failure, the PI observed two distinct patterns of patient perceptions that guided acute treatment-seeking. The first pattern was observed with persons with heart failure (HF) presenting with dyspnea, fatigue, and edema, common symptoms of HF decompensation (Zambroski, Moser, Bhatt, & Ziegler, 2005). The persons with HF reported severe, progressive worsening

dyspnea and fatigue that occurred over several days to few weeks. The pattern of treatment delays for persons with HF experiencing worsening shortness of breath ranged from three to eight days in limited extant research (Evangelista, Dracup, & Doering, 2000; Schiff, Fung, Speroff, & McNutt, 2003). The PI wondered why persons who appeared to be obviously ill would delay seeking acute treatment. Persons with HF appear to have perceptions about their health changes that are not well understood by investigators or health care providers.

The PI also noticed that persons with acute coronary syndrome (ACS) (unstable angina and/or myocardial infarction) reported delays in treatment-seeking while experiencing chest pain. The patients encountered by the PI in her practice often reported waiting a few to several hours before seeking emergency treatment. The median treatment delay for persons with ACS in the United States from symptom onset to arrival in the emergency department ranged from 1.5 to 6.0 hours (Moser et al., 2006). In a similar fashion to persons with HF, patients experiencing chest pain from ACS may hold unique perceptions about their changes in symptom status. The patient-reported delays prompted the PI to question what patients with ACS perceive about their condition and how their perceptions guide self-management. Any untimely delay in seeking treatment during ACS is potentially life-threatening to the affected individual (O'Connor et al., 2010). The topic of illness perceptions in myocardial infarction received substantive research attention over the last six years. A search of the database PubMed using the search words “illness perceptions in myocardial infarction” between 2005 to 2011 yielded 29 empiric reports on the subject. The PI came to conclude that the quantity of existing research on patient perceptions in myocardial infarction is likely sufficient to answer most questions.

Scholarly Development of the Principal Investigator

The PI turned her attention to persons with HTN after completing a statistical class project in 2007. The PI had access to a dataset of an R01-funded investigator who studied the effects of self-monitoring BP in a randomized controlled trial of over 300 African-Americans with HTN. The PI discovered a high prevalence of reported hypertensive symptoms in the study participants. In turn, she completed an extensive review of the literature of hypertensive symptom prevalence (summarized in the historical context of the study). The PI had studied Leventhal and colleagues' (2003) CSM for at least two years by the time she embarked on the statistical class project.

The PI used a measure based on Leventhal et al.'s (2003) CSM in her first inquiry, an unpublished pilot study of hypertensive symptoms (Franklin et al., 2010). The principal investigator described the hypertensive symptoms of community-dwelling African-Americans with HTN (Franklin et al.). Hypertensive symptoms were assessed using the 14-item Symptom Representation Questionnaire (SRQ) (Donovan et al., 2008). The SRQ is a standardized measure comprised of five subscales (emotional representations, timeline, control/cure, consequences, cause) with five response options from one (strongly disagree) to five (strongly agree) (Donovan et al.). Higher scores indicate greater levels of the specific trait.

The symptom prevalence and types in the pilot study was consistent with existing research findings (Beune et al., 2006; Cantillon et al., 1997; Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008; Rose et al., 2000; Wilson et al., 2002). Twenty-six of 51 participants (51%) reported experiencing hypertensive symptoms (Franklin et al., 2010). Headaches (57%, $n=15$), dizziness (54%, $n=14$), and vision changes (15%, $n=4$) were the three most frequently reported symptoms. Hypertension was reported as a significant cause of headaches ($p=.002$) and dizziness ($p=.034$) to a greater degree than hypertensive therapy. Participants with vision changes also

viewed HTN as the cause of their symptom more than treatment but the relationship did not reach statistical significance.

The PI came to two realizations from the pilot study results. First, the pilot study results are consistent with prior studies that headaches, dizziness, and vision changes are common hypertensive symptoms. Secondly, the participants' identification of HTN as the cause of their experienced symptom is additional support for perceived symptoms being associated with BP changes. The PI eventually came to the conclusion that her initial premise that the hypertensive symptoms themselves serve as the threat triggers for action may be fundamentally flawed. Leventhal's CSM was initially conceptualized to study the cognitive and emotional representations to illnesses (Leventhal et al., 2003). The CSM is predicated on the notion that a change in one's health during illness represents a threat and evokes fear and emotional distress (Leventhal & Nerenz, 1980). The investigators who developed the SRQ may have assumed that symptoms evoke a personal threat in a similar fashion as an illness in the CSM. The PI did not find the assumption that hypertensive symptoms represent a threat to study participants to be plausible based on the pilot study results. The PI thought that perceptible BP changes may be the stimulus themselves that drives action. A more useful focus for further research lies in the study of the perceived BP changes that may be manifested by the reported symptoms.

The PI came to three realizations after the pilot study results, extensive discussions with her advisor, and deep personal contemplation. The first realization is that hypertensive symptoms themselves do not warrant any further study as they have been well described in over 30 years of extant research. Secondly, the research question of relevance may be the perceptible BP changes that manifest themselves as hypertensive symptoms. This presumption led the PI to write an extensive literature review on the concept of perceptible BP changes. Finally, the critical

underlying assumption in the CSM that illness represents a perceived health threat may not be transferrable to individual symptoms. Both Leventhal and colleagues (2003) and nursing symptom theorists such as Lenz and Pugh (2008) ascribe to the belief that a symptom is a change in rather than a threat to one's usual state of health or function. The presumption of symptoms being threats to health may not have been directly validated in any study. The research query of symptoms being threats to health is not a research direction of choice for the principal investigator at the present time. The PI will investigate if symptoms pose threats to the persons reporting them in a future research study. The study has a narrower focus to describe (a) any connections between perceived BP changes and hypertensive symptoms and, (b) if and how women act on their perceptions.

The PI, in her clinical practice as a cardiovascular NP, regularly encountered hospitalized patients who perceive changes in their BP levels. She used Bickley's (1999) health history approach to gather the stories of persons with HTN. For example, an eighty-year old woman who reported she got headaches when her BP was too high. The patient stated her head felt "fuzzy" and made circles with her finger to indicate feeling mentally unclear. Anecdotally, the PI heard many reports of perceived BP changes by persons with HTN in her clinical practice. The study appears to be feasible as persons with HTN can identify and report their perceived BP changes.

In summary, the study culminated as a result of the PI's clinical practice experience and development as an investigator learning scientific inquiry. The study of the experiences of persons with HTN self-managing their perceived BP changes is a reasonable first study to explore the perceived health changes in persons with HTN.

CHAPTER THREE-METHOD OF INQUIRY- GENERAL

van Manen's (1990) phenomenologic philosophy and method are selected for use in the study to describe the experiences of women with HTN self-managing their perceived BP changes. Phenomenology is both a philosophy and a research method that focuses on the understanding of "anything that presents itself to human consciousness (van Manen, 1990, p. 9). Chapter Three consists of the following elements: (a) rationale for the selection of phenomenology, (b) background of phenomenology, (c) introduction to the guiding philosophy of van Manen's (1990) phenomenology, (d) outcome of the phenomenologic method (e) source of the method, and (f) the procedural steps of van Manen's phenomenologic research method. Key phenomenologic terms are defined throughout Chapter Three. The PI used the generic term "investigator" in the discussion of van Manen's methodology and method to reflect his guidance, beliefs, and advice for conducting phenomenologic inquiries.

Rationale for the Selection of Phenomenology

Three justifications are offered for the selection of phenomenology to study the experiences of self-managing perceived BP changes in persons with HTN. First, the phenomenon of the study appears to consist of perceptual or cognitively-focused elements. The perceived BP changes experienced by persons with HTN are tentatively posited to be the underlying subjective changes in one's BP represented by any experienced symptoms. The self-management of perceived BP changes may consist of both cognitive and physical tasks. The description of the perceptual elements of the study phenomenon can be achieved using phenomenology. van Manen's (1990) phenomenology accommodates phenomena that are objective and/or subjective in nature that present themselves to human consciousness. Secondly, van Manen (1990) contends

in his phenomenology that the experiential descriptions investigators obtain from their study participants have been interpreted and assigned meaning by the participants. The investigator in turn interprets the descriptions to discover the universal structure of the experience (van Manen, 1990). The PI concurs with van Manen (1990) that individuals label, interpret, and assign meaning to any experienced subjective and objective phenomena. Thirdly, phenomenology is posited to be a theory and hypothesis-developing activity (van Manen, 1990). The concept of self-care operations as postulated by Orem (2001) is underexplored and not well explicated in existing research. The use of phenomenology in the study may foster the advancement of extant self-care theory and/or the development of unknown theories relevant to nursing. In summary, van Manen's (1990) phenomenology can accommodate both the study phenomenon and the principal investigator's beliefs about interpretation. van Manen's (1990) philosophy and method appear to be a suitable choice to use in the study.

Introduction to van Manen's Phenomenologic Methodology

Max van Manen (1990), an educational philosopher, describes a need for a human or subjective science that can explore the emotional, historical, or social experiences of individuals that are not amenable to the empiric scientific methods of observation and explanation. The intent of van Manen with his phenomenologic philosophy is to explore and describe the subjective experiences of individuals as they exist in their "lifeworld". For van Manen, the starting point of any phenomenologic inquiry is the lifeworld of the person (the world in which people live and work). van Manen also makes a clear distinction between methodology and method in his writings. He equates "research methodology" to the philosophic framework, fundamental assumptions, and characteristics of a human science perspective" (van Manen,

1990, p. 27). A research method according to van Manen, is a series of “theoretical and practical procedures” used by an investigator to conduct a research study (1990, p. 28). van Manen’s methodology and method will be described separately in this chapter. The PI used the term “investigator” in the discussion of van Manen’s recommendations and beliefs to individuals using his methodology and method for phenomenologic studies. van Manen also equates the terms of phenomenon and experience and uses them in an interchangeable manner.

van Manen’s (1990) philosophy or methodology of hermeneutic phenomenology can be better understood through a description of seven key tenets. First, individuals are connected to their lifeworlds in an intentional manner. The notion of intention is important to van Manen (1990) as he contends that all human activity, thinking and/or acting, to be oriented to and directed by “something” and occurs in an intentional manner. The “something” of van Manen’s intentionality is the object that presents itself to the human consciousness. Intentionality is only available to the human consciousness retrospectively. Secondly, the experiences of humans can be either real or imagined (van Manen, 1990). Third, human experiences are comprised of essences or the invariant qualities that make the experience the thing that it is. Fourth, the essence of an experience can be captured through a phenomenologic description that is expressed through the written word. Fifth, a phenomenologic description of an experience is actually a mediated or interpreted version presented to investigators. van Manen (1990) contends that the phenomenologic descriptions coming from participants are actually retrospective reports of their experiences that have already been interpreted and assigned meaning by the holder(s) of the experience. Sixth, the universal essence of an experience can be derived from the experiential descriptions of individuals. Finally, investigators working within van Manen’s methodology are

part of the phenomenologic descriptions by bringing their own experiences, interests, presumptions, and expectations about the phenomenon to a study. van Manen (1990) believes that the investigator cannot eliminate or hold their preexisting beliefs in abeyance while conducting a research study. He recommends that investigators make their beliefs explicit prior to and during the research study.

van Manen's Methodology and the Post Positivist Scientific Paradigm. The PI asserts that the methodology of van Manen is consistent with a post positivist scientific paradigm (Guba, 1990). The following three sections of chapter three includes: (a) an overview of the post positivist research paradigm, and (b) demonstration of the congruence between van Manen's methodology and post positivist scientific paradigm, and (c) demonstration of the congruence between van Manen's methodology and moderate realism (Maritain, 1996; Moser, 2000; Wallace, 1996). Moderate realism is considered to be a philosophy that is consistent with post positivism (Trochim, 2006). Lincoln and Guba define a paradigm as "a basic set of beliefs that define action" (2000, p. 157).

van Manen's methodology within the post positivist scientific paradigm. The PI believes that van Manen's (1990) methodology is consistent with the post positivist scientific paradigm. The post positivist scientific paradigm is discussed briefly in terms of ontology (i.e. the nature of reality), epistemology (i.e. the relationship between the inquirer and the known/to be known), and methods (i.e. how the inquirer discovers knowledge) (Guba, 1990). Then van Manen's (1990) methodology is situated within the post positivist paradigm.

Overview of the post positivist scientific paradigm. In terms of ontology, Guba (1990) contends that reality in the post positivist paradigm consists of sense experience and subjective

perception. Since the human senses and intellect are imperfect, an individual's reality is only an approximation of what truly exists in the world (Guba, 1990; Phillips & Burbules, 2000). Guba and Lincoln (1985) refer to this premise as critical realism. In contrast, individuals ascribing to a positivist perspective contend that only one natural world exists that is governed by unchallengeable laws and can only be comprehended only through the human senses (Guba, 1990; Lincoln, 1992). The outcome of having an approximation of reality in the post positivist position is the lack of an absolute verifiable truth (Guba, 1990).

Three major assertions exist relative to epistemology in the post positivist paradigm (Guba, 1990; Lincoln, 1992; Phillips & Burbules, 2000). The assertions are that knowledge is developed in an interactive manner between the inquirer and the inquired-into, and the nature of knowledge is circumstantial rather than absolute (Guba, 1990; Phillips & Burbules, 2000). Any claim by an investigator is circumstantial at that particular point in time that can be supplanted or refuted by new evidence (Phillips & Burbules, 2000). For example, if a person sees seven white birds fly by, he or she may see that they look like geese and confirm the observation from his or her intellect. The individual seeing the geese may conclude that all geese are white in color. The individual's premise about white geese is circumstantial and refutable if he or she sees a black, brown, or gray goose. Phillips and Burbules (2000) suggest that such circumstantial conclusions are faulty or in error when they can be refuted by new evidence. The result of each individual's subjective sense perception and intellectual experience is his or her own approximation of the phenomenon or object under consideration.

Investigators need to use both qualitative and quantitative methods in the post positivist scientific paradigm to discover and describe knowledge (Denzin & Lincoln, 2000; Guba, 1990).

The underlying rationale behind the use of both quantitative and qualitative methods is that human senses and intellect have objective and subjective elements that may not be completely captured by any one method (Denzin & Lincoln, 2000; Guba, 1990). Multiple methods and data sources of data may sufficiently describe a phenomenon of interest in detail.

In summary, the common theme underlying ontology, epistemology, and methods in the post positivist paradigm is the use of both human intellect and sensory perception (Guba, 1990; Denzin & Lincoln, 2000; Phillips & Burbules, 2000). The end result of research from a post positivistic perspective is a description of an approximate truth held by the individual and that both quantitative and qualitative methods are necessary to develop knowledge (Guba, 1990).

van Manen's methodology situated within the post positivist paradigm. van Manen's (1990) methodology is consistent with the post positivist scientific paradigm (Guba, 1990; Phillips & Burbules, 2000). The degree of consistency can be appreciated through a comparison of van Manen's beliefs against the post positivist paradigm position on ontology, epistemology, and methods.

Ontology. van Manen's (1990) methodology is consistent with a post positivist scientific paradigm through a common emphasis on reality as represented by the human senses and intellect (Guba, 1990). van Manen (1990) believes that "anything that presents itself to human consciousness is of potential interest to phenomenology, whether the object is real or imagined, empirically measured or subjectively felt" (p.9). van Manen infers in this statement that the experiences that present to the human consciousness can be comprised of objective sense data and/or subjective perception and intellect. A scientist working within the post positivist paradigm may gravitate toward the study of any phenomenon that can be objectively experienced through

the senses and/or subjectively perceived and lacking physical boundaries and space (Guba, 1990).

Epistemology. van Manen's (1990) epistemological position appears to be congruent with a post positivist scientific paradigm (Guba, 1990). van Manen believes that investigators must start any inquiry with their own experiential description and explicate their own presumptions and beliefs. van Manen's (1990) assertions reflect Guba's (1990) post positivist views of epistemology in that the investigator attempts to approach objectivity but does not completely separate themselves from the inquiry. van Manen (1990) believes that participants and investigators interact in the elicitation and development of experiential descriptions to increase knowledge about the phenomenon. van Manen's (1990) descriptions of interactive knowledge development is similar to Guba's (1990) assertion that knowledge is developed during interactions between participants and investigators in the "hard sciences". van Manen's (1990) ultimate goal with his phenomenologic methodology and method is to determine the universal "essence" or invariant structure of an experience. The intent of van Manen to determine a universal essence of an experience is congruent with post positivistic beliefs of establishing an approximate truth that can be verified or revised through further research (Guba, 1990; Phillips & Burbules, 2000).

Methods. van Manen (1990) considers the principal data of human science inquiries to be the experiential descriptions of individuals. van Manen (1990) believes that multiple methods can be used to develop comprehensive experiential descriptions such as interviewing, observation, personal logs, and the use of art and literature. van Manen's approach of using multiple data sources to develop experiential descriptions is similar to Guba's (1990) assertion

that in the post positivist paradigm, multiple types of data sources are necessary. The logic underlying Guba's (1990) use of multiple methods is that if objective sensory information and subjective intellect are used, knowledge should be based on as many different sources of data as possible.

In summary, van Manen's (1990) methodology is consistent with the post positivist scientific paradigm (Guba, 1990). First, phenomena can be subjective and/or objective in nature (Guba, 1990; van Manen, 1990) Secondly, knowledge is a product of interactions between investigators and participants (Guba, 1990; van Manen, 1990). Finally, van Manen's (1990) inclusion of multiple data sources to elicit experiential descriptions follows Guba's (1990) recommendations to use different types of data to achieve an accurate representation of the subject of inquiry as possible.

Congruence between van Manen's methodology and moderate realism. van Manen's (1990) methodology is consistent with the principal investigator's beliefs of moderate realism at the level of ontology, epistemology, and method (Davies, 2009; Lincoln & Guba, 1985; Maritain, 1996; Moser, 2000; Trochim, 2006). Moderate realism was described as a philosophy that follows the tenets of post positivism (Guba, 1990; Trochim, 2006). The congruence between post positivism and moderate realism was described in Chapter One. From an ontological perspective, van Manen (1990) believes that phenomena that present themselves to the human consciousness can be subjective and/or objective in nature. The premise of van Manen is similar to moderate realism in that objects possess an objective existence independent of any awareness in subjective consciousness (Moser, 2000). Secondly, from an epistemologic perspective, van Manen's (1990) methodology appears to follow the moderate realist tenet that the human senses

and intellect are fallible and imperfect. van Manen's methodology and method, while classified as qualitative, permits the use of multiple data sources to achieve experiential descriptions to approximate the experience of the holder. van Manen (1990) advocates that investigators use participant interviews, their own observations, literature, art, biographies, and participant journals to capture and describe the universal essence of an experience. The multiple data sources advocated by van Manen (1990) are an example of critical multiplism or the triangulation of data according to Guba (1990). Guba (1990) contends that multiple data sources are needed for accurate description in the presence of subjective human intellect and sense perception.

The Background of Phenomenology

In the broadest sense, phenomenologic philosophy was initially articulated by Edmund Husserl, a German mathematician, as a means to describe subjective human experiences that were elusive to description and observation by traditional scientific methods (Lopez & Willis, 2004). Husserl's efforts fostered the development of two schools of phenomenologic philosophy, descriptive and hermeneutic (McConnell-Henry et al., 2009). Husserl was a descriptive phenomenologist who emphasized the description of subjective human experiences as presented to human consciousness (Giorgi, 2009). The central belief of descriptive phenomenologists is that the prereflective experience that presents itself to consciousness is not interpreted by the holder and in turn is described as such to the investigator (Todres, 2005). Other phenomenologic philosophers such as Heidegger and Merleau-Ponty were influenced by Husserl but did not believe that human experience remained uninterpreted by the individual (Lopez & Willis, 2004). The fundamental differences in beliefs among philosophers about the role of interpretation by

humans about their experiences prompted the advent of interpretative or hermeneutic phenomenology (Lopez & Willis, 2004; McConnell-Henry et al., 2009). The intent of hermeneutic phenomenology is to describe the “interpretation” of human subjective experience as they live in their everyday world (Lopez & Willis, 2004; McConnell Henry et al., 2009). van Manen is classified among the hermeneutic phenomenologists (McConnell-Henry et al., 2009). van Manen’s position among the hermeneutic philosophers is likely based on the importance and acknowledgement of interpretation and meaning in his phenomenology. van Manen (1990) believes that interpretation in his methodology occurs on two levels. The first level is the experiential description of the individual, which is actually a mediated version of the experience (van Manen, 1990). van Manen contends that experiential descriptions provided to investigators are mediated by the individual’s interpretation and reflection. The second level of interpretation is through the thematic analysis of the investigator (van Manen, 1990). The investigator identifies the themes in each individual participant experiential description with the intent to identify and describe the overarching themes that constitute the universal essence of the experience (van Manen, 1990).

Outcome of the Method

The anticipated outcome of using van Manen’s (1990) research method is a deep, detailed written description of the universal essence of the experiences of self-managing perceived BP changes by women with HTN. The universal description is developed through the experiential descriptions of individuals (van Manen, 1990). van Manen (1990) asserts that the account of the experience given by the participant to the investigator is a description of the phenomenon of

interest. In turn, the investigator interprets the descriptions of the participants' experiences to discover the universal invariant structures of the phenomenon (van Manen, 1990).

The Six Steps of van Manen's Research Method

van Manen (1990) developed a six-step method to guide investigators to conduct phenomenologic inquiries. The six procedural steps of van Manen's (1990) method are (a) turning to a phenomenon of interest, (b) investigating experience as it is lived rather than conceptualized, (c) reflecting on essential themes that characterize the phenomenon, (d) describing the phenomenon through writing and rewriting, (e) maintaining a strong and oriented relation to the fundamental phenomenon, and (f) balancing the research by considering the parts and the whole). van Manen (1990) believes that an investigator conducting a phenomenological inquiry using his research approach performs all the six activities in a dynamic and concurrent manner. Each of the six steps of van Manen's (1990) method is individually described in detail.

Turning to a phenomenon of interest. The first step in van Manen's (1990) method requires the investigator to turn to a phenomenon of interest. van Manen (1990) believes that investigators must be oriented to the phenomenon of attention with a clear notion of their own interest in the phenomenon. For example, the PI of the study has an interest and orientation to the phenomenon of self-managing perceived BP changes from the standpoint of a nurse who is interested in understanding the human response to illness and improving the health of persons with HTN. van Manen (1990) suggests that investigators state their own interest in and orientation to the phenomenon by explicating preexisting assumptions and understandings. van Manen (2011a) believes that an investigator can achieve the explication of their preexisting assumptions and understandings through the practice of phenomenologic reduction, or

bracketing. van Manen (2011a) considers phenomenologic reduction as a practice of avoiding “all abstraction, all theorizing, all generalization, even all belief in the existence of what we call “real” or “not real”. van Manen (2011a) asserts that at the onset of a research study, phenomenologic reduction is difficult for investigators to do as they are likely immersed in relevant empiric studies and theories. He considers phenomenologic reduction to be essential for the investigator to stay oriented to the phenomenon throughout the study as it is lived by the holders of the experience.

Investigate the phenomenon as it is lived rather than conceptualized. The second step of van Manen’s approach (1990) is that investigators research the phenomenon as people live it without “interpretive generalizations” or causal explanations (p. 54). van Manen suggests that the investigator develops an “ego-logical” attitude and provides a personal account of their own experience with the phenomenon. The investigator in turn gathers the accounts of persons with the requisite experience to develop a deeper understanding of the phenomenon of interest. The primary source of ‘lived experience material’ are open-ended, semi structured interviews (van Manen, 1990).

Reflecting on essential themes that characterize the experience. The third step of van Manen’s (1990) research method requires the investigator to discover the essence of the experience through reflection on essential themes. van Manen (1990) identifies three types of thematic reflection in his method. The first type of thematic reflection is the use of four broad existential themes or guides to derive meaning from texts in the inquiry process (van Manen, 1990). van Manen (1990) identifies the four existential themes as (a) lived space (spatiality), (b) lived time (temporality), (c) lived body (corporeality), and (d) lived human relation

(communality). van Manen (1990) contends that humans are connected to their lifeworld through space, time, their corporeal bodies, and their relationships with others. The second type of thematic reflection is a two-step process of reading the texts by the investigator to discover existing themes (van Manen, 1990). First, the investigator reads the text “wholistically” to determine the phrase that best captures the fundamental meaning within the description (van Manen, 1990). Secondly, an investigator can read text or listen to a description in a selective manner to determine the phrases that appear to reveal key aspects of the phenomenon (van Manen, 1990). The investigator then reads a text line-by-line to assign meaning (van Manen, 1990). van Manen (1990) acknowledges that one of the most challenging tasks for an investigator is to distinguish essential from incidental themes to develop a strong phenomenological description. van Manen (1990) recommends that investigators ask themselves if the phenomenon is the same and/or loses fundamental meaning if a theme is changed or deleted from a description. The third type of thematic analysis identified by van Manen (2011b) is hermeneutic interview thematic reflection. The investigator schedules a series of interviews to collaborate with participants to identify and clarify the existing meaning of preliminary transcript themes (van Manen, 2011b).

Describe the phenomenon through writing and rewriting. The fourth step of van Manen’s (1990) research approach is to represent the hidden structures of a phenomenon through the acts of writing and rewriting. van Manen considers the process of phenomenologic inquiry to be inseparable from the practice of writing in three ways. First, the act of writing in a phenomenologic inquiry goes beyond writing up study findings (van Manen, 2006). Secondly, a powerfully written phenomenologic text conveys the deeper meaning and interpretation of an

experience (van Manen, 1990). van Manen (1990) advocates the use of anecdotes or stories to convey the meanings embedded in the experiential descriptions of participants. He also suggests that investigators should vary the examples of anecdotes to illustrate the invariant structure of an experience (van Manen, 1990). Third, van Manen (1990) describes a paradox facing the investigator during the inquiry process. van Manen (1990) describes that “writing distances us from the lifeworld, yet it draws us more closely to the lifeworld” (p. 126). The statement of van Manen is meant to express that investigators must try and separate themselves from their own daily world through writing. The distance that investigators create between themselves and their lifeworld is meant to prevent their personal experiences from becoming the focus of inquiry. In turn, the investigator can use the written word to convey the previously unspoken experiences of the participants in their lifeworld, the original focus of inquiry (van Manen, 1990). Finally, the act of rewriting holds particular significance for van Manen. He suggests that critical insights are gained by the investigator during writing and rewriting during phenomenologic reflection (van Manen, 2006).

Maintain a strong and oriented relationship to the phenomenon. The fifth step of van Manen’s (1990) research method is to maintain a strong and oriented approach to the phenomenon. van Manen (1990) believes that the investigator’s viewpoint during an inquiry is framed by their orientation in and to the world. He contends that an educator should be able to demonstrate a pedagogical orientation to the phenomenon in the texts (van Manen, 1990). van Manen (1990) suggests four criteria that can be used to evaluate the degree to which texts reflect the orientation that investigator maintains toward the phenomenon. The first criterion is that the text should reflect the way in which the investigator is oriented to the phenomenon. The second

criterion is that investigators should aim for the strongest interpretation of the phenomenon that reflects their orientation. The third criterion is that texts should be rich in detail and include stories and anecdotes of the participants. Fourth, the texts should have sufficient depth for readers to orient themselves to the meaning of the experience.

The PI brings her orientation as a nurse with an interest in perceived health to the study of the experiences of self-managing perceived BP changes. The American Nurses Association's (ANA) (2003) definition of nursing is "the diagnosis and treatment of human responses to actual or potential health problems". Both components of the study phenomenon are consistent with the ANA (2003) definition, namely self-management (e.g. a human response) and perceived BP changes (e.g. an actual or potential health problem). An investigator with a medical orientation may not conduct the study with a belief that HTN is an asymptomatic condition. Another investigator with a psychological orientation may study the cognitive-perceptual aspects of the phenomenon while ignoring the connection to the human response to illness. The PI concurs with van Manen (1990) that she needs to demonstrate her orientation as a nurse to the phenomenon of the study with oriented, strong, rich, and deep research texts.

Balance the research context between the parts and the whole. The sixth step of van Manen's (1990) research method is to balance the research context between discrete parts and the study as a whole. van Manen (1990) believes that investigators need to have plans for data collection, analysis, reporting, and a clear vision as to the direction of how the study proceeds forward. van Manen (1990) cautions investigators that the human science of phenomenology requires an openness and flexibility for choosing techniques, procedures, and sources that were

not foreseen at the start of the study. The caveat for openness and flexibility in research design may represent the balance between the discrete components and the study as a whole.

In summary, van Manen (1990) articulated a six-step method to assist investigators in conducting phenomenologic studies. The results of his method are phenomenologic texts that represent the experiences of both participant and investigator. van Manen's (1990) methodology and method are appropriate to investigate the phenomenon of the study, self-managing perceived BP changes in women with HTN.

CHAPTER FOUR-METHOD OF INQUIRY: APPLICATION

The Six Steps of van Manen's Research Method

van Manen's (1990) six-step research method was used in the study to explore the phenomenon of self-managing perceived BP changes in women with HTN. The PI discovered the universal structure of self-management by obtaining, analyzing, and aggregating the descriptions of participant experiences. The six steps consist of (a) turning to a phenomenon of interest, (b) investigating experience as it is lived rather than theorized or conceptualized, (c) reflecting on essential themes, (d) representing the phenomenon through writing, and rewriting, (e) maintaining a strong and oriented relation to the phenomenon, and (f) balancing the research context between the parts and the whole (van Manen, 1990). The principal investigator's procedures to conduct the study are discussed within the steps of van Manen's (1990) method. The PI's procedures for human subjects' protection is discussed following the application of the six-step method to the study. While van Manen's (1990) method is listed in a sequential order, the six steps occur concurrently throughout the study.

van Manen's First Step: Turning to a Phenomenon of Interest

Three key activities are necessary to apply van Manen's (1990) first step, turning to a phenomenon of interest. The PI is an active participant in and is integral to the data collection and analysis processes in the study. As such, study procedures that clarify the activities and role of the PI must be articulated at the outset of the study. The PI views three activities are necessary to integrate herself directly both as a partner and participant in the research process. The activities are articulating a phenomenon of interest, using personal experience as a starting

point for a phenomenologic inquiry, and demonstrating a phenomenologic attitude or bracketing (van Manen, 1990). Each of the activities is discussed individually.

Articulate a phenomenon of interest. The phenomenon of interest in the study is the self-management of perceived BP changes in women with HTN. Therefore, the aim of the study is to describe and understand the experiences of self-managing perceived BP changes in women with HTN. The phenomenon was developed from two implicit assumptions that were not directly tested in existing research: (a) that a perceived BP change may underlie a hypertensive symptom, and (b) women with HTN are self-managing perceived BP changes rather than hypertensive symptoms (Beune et al., 2006; Cantillon et al., 1997; Connell et al., 2005; Gohar et al., 2008; Lenz & Pugh, 2008; Meyer et al., 1985; Middeke et al., 2008; Rose et al., 2000).

The PI's personal experience. The PI's personal experience of the phenomenon of the study is situated in two particular contexts. The first context is clinical in nature and arises from the PI's experience as a cardiovascular nurse practitioner. The PI regularly encounters patients in her clinical practice who report changes in their BP levels according to their symptoms and perform self-management actions. These patients inspire self-reflection and thoughts about the phenomenon that are relevant to the study. For example, the PI met a 35 year-old female with atypical chest pain and HTN. The patient stated she had been off her antihypertensive medication for more than a year due to a lack of insurance and access to a physician. She stated she could tell when her BP is elevated by the presence of headaches and uses her mother's antihypertensive medication on an as needed basis. This specific patient encounter caused the PI to wonder how access and resources guide self-management. However, in the clinical context, the PI only had 15 to 20 minutes to gather specific clinical details to make a differential diagnosis and treatment

recommendations and lacked the time to obtain deeper information. The clinical stories of her patients were a strong impetus for the principal investigator to articulate the study phenomenon.

The second context is the PI's scholarly interest and experience in studying questions about perceived health in cardiovascular disease. The PI spent many years studying the work of Leventhal and colleagues (2003), social psychologists, and investigators on how people cognitively depict or represent illness. Over her five years as a doctoral student, the PI used Leventhal et al.'s CSM (2003) for illness to devise two separate studies, dyspnea symptom representations in persons with HF and hypertensive symptom representations. The outcome of the pilot study on hypertensive symptoms led the PI to devise the study. However, the heavy influence of Leventhal on the principal investigator's perspective poses a challenge in her ability to be open to receive new information and/or different viewpoints.

An important challenge for the PI in the planning and conduct of the research study is recognizing the potential confounding of clinical and research roles. The PI interviewed participants with cardiovascular disease in the study. Participants may ask questions and seek advice about their BP that cannot be addressed by the PI the study. She referred them to their primary care provider. The PI was first exposed to role conflict as a research assistant interviewing persons with diabetes and depression about their decision-making and use of a decision support aid. Research participants would report bothersome physical symptoms and lack of support, concern or acknowledgement from their own providers during research interviews. The PI had to remind herself she was a researcher collecting data from the participants according to the parameters of the study and not a cardiovascular NP who could advise them on their symptoms directly.

The explication of the PI's preexisting beliefs. The PI followed van Manen's (1990) recommendations to make her preexisting beliefs and expectations about the study phenomenon explicit during the research process. The PI identified her preexisting beliefs about her philosophy, perceived BP changes, self-management, health, the environment, nursing, and humans in Chapter One of this study proposal. The statements are a preliminary examination and explication of her beliefs prior to commencing the study. The PI must be vigilant in her attention to her beliefs and potential influences on the research process.

The procedure the PI used to explicate her beliefs and assumptions on an ongoing basis is keeping a self-reflective journal. The purpose of a self-reflective journal in a qualitative research study is to separate the perceptions and interpretations of the investigator from the stories of the participants (Finlay, 2002). The content of the self-reflective journal includes the investigator's thoughts, beliefs, interests, theorizations, and categorizations (Lincoln & Guba, 1985). The PI dictated self-reflective entries in Microsoft Word using Dragon Naturally Speaking Voice recognition software version 10. The Dragon software permits the transcription of the dictated entries into Microsoft Office with notable accuracy and ease of correction of errors. In turn, the Microsoft Word dictations can be imported into a designated folder in NVivo 9 qualitative research software (QSR International, 2011).

The PI made both triggered and regular entries into the self-reflective journal. The trigger for making an entry in the self-reflective journal was any encounter in the clinical setting with a patient reporting an experience with the study phenomenon. Daily journal entries were made during ongoing participant recruitment, data collection, and analysis. The PI met with her adviser

and/or other dissertation committee members at regular intervals (to be determined at a later date) to discuss the self-reflective journal entries.

Adopting a phenomenologic attitude. Adopting a phenomenological attitude by the PI is demonstrated through the practice of bracketing (van Manen, 2011a). The intent behind bracketing is for the PI is to keep all theorizing, abstraction, and categorization separate from the experiential data descriptions of participants (van Manen, 1990). The PI used the self-reflective journal as previously described to delineate or bracket her presumptions, beliefs, theorizing, and biases. The self-reflective journal is the most appropriate place for the principal investigator at the intervals as described above to maintain bracketing throughout the study.

The first step of van Manen's (1990) method, articulating a phenomenon of interest, is focused directly on the PI. The PI explicated her preexisting biases and assumptions and practice bracketing by keeping a self-reflective journal. Keeping a self-reflective journal has a notable benefit for the principal investigator. The PI has the chief responsibility to assure rigor in her study. A self-reflective journal was a key component of an audit trail of key methodological, analytic, and procedural decisions (Lincoln & Guba, 1985).

van Manen's Second Step: Investigating Experience as it is Lived

The second step of van Manen's (1990) research method is investigating the lived experience of participants prior to any categorization, conceptualization, or theorizing. The investigation of lived experiences is achieved through "gathering or collecting lived-experience material" (van Manen, 1990, p. 53). In order to obtain lived-experience descriptions, specific procedures are needed for participant recruitment and data collection are necessary that outline the steps and preliminary decisions in the study.

Participant recruitment procedures. Four procedures constitute the participant recruitment process: identifying optimal study participant, purposive criterion-based sampling, locating participants, and gaining access and establishing rapport. Each procedure is described in detail.

Identifying optimal study participants. The optimal study participant for the study was an African or European American woman between the ages of 18 to 65 with an established diagnosis of HTN for at least two years, who speaks and understands English, can ascertain that her BP changes based on what she feels, is not pregnant, and has lived in the United States for most of her adult life. Participants needed to be at least 18 years of age to provide legal consent to participate in the study in the state of Michigan. The reason for excluding women over the age of 65 is that there is an increased prevalence of multiple symptomatic chronic diseases at advanced ages (Wolff, Starfield, & Anderson, 2002). Women must have a diagnosis of HTN for at least two years. The reason for needing women with HTN experience is that persons who have lived with HTN for a longer period of time were more likely were to subjectively monitor their BP levels according to their symptoms than newly diagnosed persons (Meyer et al., 1985). The optimal study participant was free of any cognitive, and/or psychiatric issues that would preclude their ability to participate in an interview lasting up to one hour. The PI used participant self-report to ascertain any existing psychiatric conditions. Pregnant women were excluded as they are prone to pregnancy-induced HTN and may have unique hypertensive symptoms. The reason for including only women who have lived in the United States for a majority of their adult lives is to identify participants who have been exposed to the American health care system and have corresponding beliefs, values, and expectations about their health. Individuals who have lived in

a foreign country as adults may likely differ in terms of their beliefs, values, and expectations about health. The PI excluded any participant who she believed would not be able to tolerate the interview.

The PI screened all participants for cognitive impairment using the Mini-Cog cognitive screening tool, consisting of a three word recall and a clock-drawing exercise (Borson, Scanlan, Brush, Vitaliano, & Dokmak, 2000). The Mini-Cog has an administration time of three minutes and has a sensitivity of 99% and specificity of 95% in discriminating between persons with and without cognitive impairment from dementia (Borson et al., 2000). Women who can recall all three items correctly or recall one or two items with no errors in the clock draw test was included in the study. In the study, participants were screened for the inclusion criteria except for the Mini-Cog prior to enrollment. The PI completed the Mini-Cog with a potential participant at the time of scheduled interview.

The PI selected European and African American women for the study for two reasons. First, there are quantitative descriptions of hypertensive symptoms in White women. The investigators of the extant research of hypertensive symptom management used only Black African or African American participants. The presumed assumptions from extant research that formed the study phenomenon were based on responses from Black or African American participants. Secondly, European and African American women are members of the predominant racial/ethnic groups residing in the tri-county metropolitan Detroit area. A sample consisting primarily of African and European American women would reflect the majority of the constituents in the local community.

Purposive criterion-based quota sampling. The principal investigator employed a purposive criterion-based quota sampling strategy in the study. Purposive sampling is a type of non-probability sampling strategy in which an investigator selects participants that can best inform the research question or aim (Stommel & Wills, 2004). A purposive sampling strategy will not yield a sample that is representative of the entire population of persons with HTN but will generate a group of participants with the characteristics relevant to the study (Bernard, 2011; Stommel & Wills, 2004). The criterion that the principal investigator used to select cases was that participants must be able to tell that their BP changes based on how they feel. The PI desired to recruit and enroll a sample that is comprised of equal numbers of Black and White women. The PI selected a minimum of five black and five white women as the principal sample. The rationale behind interviewing an equal number of Black and White women through the first ten participants is that most of themes generated in qualitative research are obtained in the first six interviews (Bernard & Ryan, 2009). The PI recruited Black and White women one at a time after the first ten interviews until no new themes are generated.

The number of participants needed for the study is guided by achieving data saturation. Data analysis and participant recruitment are concurrent activities in a phenomenologic study. The minimum number of participants recommended for a phenomenologic study is five to twenty individuals (Bernard & Ryan, 2010; Creswell, 2007). Data saturation is the point in analysis during which no new themes or insights are obtained when additional participant descriptions are added to the database (Bowen, 2008; Munhall. 2007). Bernard & Ryan (2010) found in their own research experience that the majority of themes are discovered after six participants and little new information is added by the twentieth interview. At the point where

the PI observed redundancy in the data codes and themes, she added one female participant at a time until no new information was discovered. She anticipated the sample size for the study would range between ten and twenty women (Bernard & Ryan; 2010; Creswell, 2007).

Locating participants. The optimal site to locate and recruit study participants for the study was the Wayne State campus, and ambulatory internal medical, hypertension, and cardiology clinics as needed in the metropolitan Detroit area. The PI anticipated that the Wayne State campus would be a sufficient site to begin the study. A primary care clinic in the metropolitan Detroit suburbs served as the second recruitment site for participants in the study. An ambulatory clinic is a suitable place to recruit participants with HTN. In 2007, essential hypertension was the principal diagnosis for 79.1 % for persons visiting ambulatory care practices (Centers for Disease Control (CDC)/Center for Health Care Statistics, 2011). The data from the CDC/Center for Health Care Statistics supports the PI's intent to use outpatient clinics as a possible site to recruit study participants. Letters of support were obtained as needed from each clinical site agreeing to permit the principal investigator to recruit participants in the study.

Gaining access and establishing rapport. The PI anticipated working closely with administrative and clinic staff to gain access to and establish a rapport with participants. Permission was sought from the appropriate administrators or clinic staff to place flyers advertising the study in the Wayne State campus areas and pipeline, or clinic waiting rooms. Potentially interested individuals called the PI at the dedicated number on the flyer or advertisement. When the PI was called by a potential participant, she explained the study, screened for the inclusion and exclusion criteria, and determined if the individual was interested

in and appropriate for participating in the study. The PI completed the Mini-Cog cognitive screening measure with participants to an interview.

Data types and collection procedures. Four types of data were collected in the study. The primary data was the semi-structured interviews from survey participants. Demographic data was collected on a form developed by the PI to permit description of the study sample. The third type of data collected by the PI was field notes. Each type of data and the corresponding procedures for data collection is described individually. The fourth type of data was the PI's self-reflective journal entries, and methodological decisions that were recorded over the course of the study. This section on data collection concluded with interview conduction, taping and transcribing data, and data storage procedures.

Obtaining demographic data. The PI recorded participant demographic information on a form developed for the study. The PI recorded race, age, socioeconomic status, number of years living with HTN, antihypertensive medications (type and number), and any medical comorbid conditions. Each participant was only be identified by a name that she chose for herself. These documents were stored in a safe accessible only by the PI. Blood pressures were not measured during the study as the study phenomenon is based on participant perceptions about his or her BP changes. See Appendix A.

Obtaining data through interviews. The investigator-participant interview is the chief mode for exploring and describing the lived experience of a participant and establishes a relationship between the investigator and participant about the experience (van Manen, 1990). A semi-structured interview allowed the PI to retain some control over the interview content and order of questions but is flexible enough follow to follow participants' responses as they are

given to the investigator. A protocol ensures that all participants were asked similar questions in a consistent fashion. The PI interviewed all participants once. The interview was to obtain the participant's descriptions of his or her experience. Participants were offered compensation for their time in the form of a twenty-five dollar Meijer gift card for the interview.

The semi-structured interview guide was developed by the PI in consultation with her advisor and committee members. The interview guide was constituted of three broad open-ended questions such as (a) what is it like to live with high blood pressure, (b) what is happening to your blood pressure when you feel (insert participant symptom), and (c) what do you do when you feel (insert participant symptom). Other probe questions included what are you thinking when you feel (insert participant response), what does it mean when you feel (insert participant response), and what did you tell your doctor about your (insert participant response). The interview guide has built-in probes that the PI used to have the participant describe the experience in more detail without being led or prompted. The use of probes are encouraged such as "tell me more about that", "can you elaborate more on that" to encourage participants to describe their thoughts without prompting. See Appendix B for the interview guide.

Participant interviews were conducted onsite at the College of Nursing on the Wayne State Campus or clinic of initial recruitment. The reason for conducting interviews in the College of Nursing or clinics is to have some degree of uniformity in the interview conditions and settings and minimize extraneous distractions. The PI was responsible for assuring participant comfort and privacy, and minimizing distractions.

Participant interviews were digitally recorded with two recorders running simultaneously to capture the data in the event of any equipment malfunction. The PI was responsible for assuring proper equipment function prior to the interview and carrying extra batteries and tapes.

The PI's field notes. The third type of data to be recorded by the PI was field notes during and after the interview. The purpose behind keeping field notes was for the PI to record what she observed during the interview that was not captured on tape. The content of field notes includes participants, the interview setting, social interactions, participant nonverbal behaviors, the PI's self-reflections and any activities that occurred during the course of the interview (Patton, 2002). The interview guide had space for the PI to record observations during the course of the interview. The PI dictated field notes entries into word documents using Dragon Naturally Speaking 11.0 software immediately following the interview. Field notes were stored in designated folders in NVivo 9.0 (QSR International). The field notes are a critical data source in the data analytic process. The coding of field notes was described in the data analysis section.

The PI's self-reflective journal and methodological decisions. The fourth type of data recorded by the PI was self-reflective journal entries and methodologic decisions. These forms of data have particular importance in the study as evidence of the PI's adherence to the study protocols. Self-reflective journal entries and methodological decisions were stored in designated folders in NVivo 9.0 (QSR International). The data was not be analyzed but was used to form the audit trail of the study (to be described later in Chapter Four under procedures for trustworthiness).

Preparing the data for analysis. If the interview was completed without incident, the two digital recordings were presumed to be complete without gaps or missing components. The PI

listened to one participant recoding (labeled by participant number recording A) to assure that the recording was complete prior to sending it to the professional transcriptionist to generate data transcripts. The second digital recording was labeled as recording B and secured on a dedicated hard drive in a safe accessible only by the PI. Recording B was used as a backup data source only if Recording A was damaged or missed responses. Recording B was locked in the same safe as tape A. The recorded interviews were professionally transcribed to generate data transcripts. The PI checked the data transcript against tape A and make corrections in Microsoft Office 10. The verified data transcripts were loaded into NVivo 9 for coding and stored individually by the participant self-selected name.

Secure data storage. The recordings and transcripts were locked in a safe in the PI's house. The PI was the only person with access to the data. The tapes and transcripts were de-identified and assigned corresponding participant self-selected names. For example, the recording and transcript for the first participant's first interview was labeled "Mary interview recording A and transcript A. Data transcripts and recordings were transported to and from interviews in a locked briefcase. The data was analyzed on a laptop with both fingerprint and password protection accessible only by the PI.

Evaluating the study procedures. Multiple issues were anticipated to occur during participant recruitment, enrollment, and data collection. The PI used the first two or three interviews to evaluate the recruitment, enrollment, and interview procedures and made any necessary adjustments in consultation with her research adviser and committee members. The recordings and transcripts were reviewed to assess the interview guide and make any necessary revisions.

Van Manen's Third Step: Reflecting on Essential Themes

van Manen's (1990) third step, reflecting on essential themes, contains the data analysis procedures of the study. The intent of the PI in using van Manen's phenomenology was to discover the universal structure of the experience of self-managing perceived BP in women with HTN. The discovery of the universal structure of an experience for van Manen lies in two broad principles. First, an investigator working with van Manen's method works with the text in a circular fashion between whole participant descriptions and field notes and their constituent parts. Secondly, the structures of an experience are represented by themes (van Manen, 1990). Two types of data were generated in the study, demographic data and textual data arising from interviews. The PI used descriptive statistics to aggregate the demographic data and describe the study sample. For the textual data, the PI used a three-step thematic analytic process of assigning descriptive codes, interpretive themes, and overarching themes to work with the participant descriptions and her own field notes. Each step in the analysis of textual data was described in detail.

Descriptive coding. Descriptive coding is the first step in van Manen's (1990) thematic analysis necessary to fracture whole participant descriptions and the PI's field notes into their constituent parts. This step consists of two procedures. The first procedure in descriptive coding is a thorough reading of the whole data transcript in its entirety by the PI. The intent behind a "wholistic" reading of the transcript is to grasp the fundamental meaning and context of the complete text. The second step of descriptive coding is to highlight sentences or clusters of sentences that the PI deems to be relevant to the study phenomenon. The PI asked herself basic questions such as the concern at hand, who, when, how, why, intention/purpose, means/

tactics/strategies to apply descriptive codes to the text (Liamputtong, 2009). The PI identified key words used by participants or themes observed in the data. The key words and/or themes discovered in the data by the PI are the descriptive codes (King & Horrocks, 2010). The procedure of assigning descriptive codes to a participant transcript and a field note entry is repeated for every participant transcript in the study. The PI's use of the participants' words as descriptive codes whenever possible is an inductive analytic approach stay as close as possible to the participants' views of their experiences.

The PI documented her decisions as to how and/or why a word or theme is a relevant descriptive code using NVivo 9 (QSR International). Within NVivo 9, an assigned code by the PI was referred to and stored as a "node". The program's functions permitted the PI to write a description of the node each time she descriptively coded a section of text. The node description contained the PI's thoughts and decisions as to why the particular section of text was coded in that particular way. The PI had a folder within NVivo 9 for each participant to store her data transcript, labeled nodes and associated field notes.

Interpretive coding. The second step in thematic data analysis is the identification of interpretive codes in transcripts and field notes in the data set (Braun & Clarke, 2004; King & Horrocks, 2010; Liamputtong, 2009). The identification and formation of interpretive codes from descriptive codes is the next step of the van Manen's circle in interpreting and reintegrating the discrete data elements into a new whole description. In this step, the PI examined the descriptive codes within an individual transcript for interpretive themes. An individual or cluster of descriptive codes was interpreted by the PI as a new hierarchical theme. Within NVivo 9,

multiple discrete nodes can be clustered together into an aggregate “tree node”. The PI attached salient text data and descriptions for the tree node and store it within NVivo 9.

Selection of overarching themes. The third stage of data analysis for the study is the identification and application of the overarching themes that represent the entire data set (Braun & Clarke, 2006; King & Horrocks, 2010; Langdrige, 2004; Liamputtong, 2009). This stage of data analysis represents the completion of van Manen’s (1990) circle by reintegrating the interpreted themes into a new composite description of the experience. The overarching themes characterize the universal structure of the study phenomenon. The interpretive themes were aggregated together by the PI to form overarching themes that are applicable across the entire dataset. The data deemed to form an overarching theme should be internally homogenous but externally distinct from other overarching themes (Braun & Clarke, 2004). The PI also recorded the judgments and decisions as to how overarching themes were formed from interpretive codes in labeled folders in NVivo 9.

Consensual validation of codes and themes by a second investigator. A faculty member from the PI’s dissertation committee coded transcripts and developed themes from the study data independently of the PI. The PI and the faculty member acting as the second independent investigator met to compare and discuss the descriptive codes, interpretive, and overarching themes developed from the data. The two investigators worked together to reach a consensus regarding the codes, interpretations, and themes in the study. The intent behind two independent investigators consensually validating the codes and themes is to provide evidence of confirmability of the study, a key rigor component of study trustworthiness (to be described and defined later in this chapter).

Incorporation of NVivo 9 analytic software. The qualitative data analysis software program NVivo 9 (QSR International, 2011) was used by the PI in many necessary functions for the study. At a broad level, the PI created and explored data documents and created hierarchical nodes in which data is coded, and linked together (Wong, 2006). Additional functions in NVivo 9 permit the creation of thematic maps and storage of related data documents such as investigator field notes and the methodological logs. The advantage to using NVivo 9 in the study is to add organization and transparency to the data collection and analysis process (Welsh, 2002; Wong, 2006). The PI attended a two day training session in basic and advanced functions in NVivo given by QSR trainers prior to the start of data collection.

In summary, the PI used van Manen's (1990) hermeneutic circle to apply descriptive and interpretive codes in and across the dataset to discover the overarching themes in the study. The principal investigator used NVivo 9 (QSR international, 2011) to facilitate many key functions such as data creation, review, coding and storage of key data documents and memos in the data analysis process.

van Manen's Fourth Step: Writing and Rewriting

The outcome of the study was the development of a phenomenologic text describing the self-management of perceived BP changes by women with HTN. The PI employed an iterative process of writing and rewriting at many procedures in the study. The incorporation of writing in the study design is a necessity as words are the data of a phenomenologic inquiry. The key procedures using writing in the study is PI self-reflection, data analysis, coding descriptions, methodological decisions, and developing the phenomenological description.

Investigator self-reflection. The PI wrote her underlying assumptions, and beliefs in a self-reflective journal prior to and during data collection and analysis. There are two primary reasons for the PI to maintain a self-reflective journal throughout the course of the study. First, the PI explicated her underlying beliefs, assumptions, and thoughts related to the study phenomenon. The explication of her underlying beliefs and assumptions about the phenomenon met van Manen's (1990) recommendations for bracketing. Secondly, evidence of the PI's self-reflection in a journal is a key component of making the study process transparent to and auditable by others (Lincoln & Guba, 1985).

Data analysis of participant descriptions. The data analysis process of study participants' descriptions incorporates substantive writing at two main points in the study. First, the PI descriptively coded sentences or clusters of sentences with representative words and attached comments. Interpretive themes are derived from the descriptive level codes (King & Horrocks, 2009). Second, the interpretive themes of participant descriptions are used to develop overarching themes that characterize the entire dataset. The process of using words as descriptive codes, and interpretive and overarching themes in data analysis relies heavily on writing.

Documenting methodologic decisions and logistical details. The PI recorded the daily schedule, logistical details, and ongoing methodological decisions that occur during the course of the study. The PI considers methodological decisions to be those actions aside from coding descriptions in data analysis that impact participant recruitment and enrollment, study sites, and interview protocols. The daily schedule, logistical details, and methodological decisions were recorded on a daily basis during data collection and analysis and stored sequentially in designated folders in NVivo 9 (QSR International, 2011). The daily schedule, logistical details,

and methodological decisions are kept but not analyzed to form part of the study audit trail. The PI anticipated that a member of her dissertation committee would audit these data files for her adherence to and assess the transparency of the study protocols.

Developing the phenomenologic description. The most critical writing activity in the study was the construction of the phenomenologic description or narrative that synthesizes the overarching themes into a cogent story of the phenomenon. The phenomenologic description is based on participant anecdotes and stories that support the overarching themes in the study (van Manen, 1990). The development of the phenomenologic description is expected to be the most challenging writing activity for the PI. The PI created a compelling story of the participants' experiences. Secondly, the phenomenologic description is more than a mere description of results. The PI used an iterative writing process to develop the phenomenologic description with feedback from her advisor and committee members.

In summary, words have multiple roles in the reflective, descriptive, interpretive, and analytic components of the study. The PI engaged in an iterative process of writing and rewriting in the study with guidance from her dissertation committee.

Van Manen's Fifth Step: Maintaining a Strong Orientation to the Phenomenon

The fifth step of van Manen's (1990) method was for the PI to maintain a strong and oriented relationship to the phenomenon. The relationship of the PI to the study phenomenon is demonstrated through writing in an oriented way (van Manen, 1997). The text was judged against four key criteria, orientation as nurse practitioner and investigator of perceived health changes, strength of interpretation, richness of detail, and depth/breadth of the characterization of the phenomenon (van Manen, 1990). The PI anticipated that van Manen's (1990) criteria added a

layer of complexity to the iterative writing process of the study. She expected that multiple drafts of the phenomenologic description were necessary to sufficiently demonstrate her orientation to the phenomenon through writing.

Van Manen's Sixth Step: Balancing the Research Context

The sixth step of van Manen's (1990) method is to balance the research context. A research study must have a preliminary direction and procedures for data collection and analysis, establishing study trustworthiness, and the ethical treatment of participants. The difference in the research context from a human science perspective is that that any research plans must be sufficiently flexible to change as the study moves forward (van Manen, 1990). The need for flexibility to make necessary adjustments in the study is essential as data collection and analysis occur concurrently. The PI made initial study protocol revisions for data collection and analysis based on encounters with the first two participants and in consultation with her research supervisor.

Human Participant Protection

Overview. The research was a qualitative interview study with community-dwelling adult women between the ages of 18 to 65 who had a diagnosis of HTN. The methods and procedures of the study were submitted for review and approval by the Institutional Review Board (IRB) of Wayne State University with supporting letters from participating clinics as needed. The PI anticipated that participants were exposed to minimal to low risks in the study. The study employed qualitative interviews with no intervention or control group. The chief study-related risks the PI anticipated for study participants were fatigue, emotional upset, loss of privacy, confidentiality, and active hypertensive symptoms.

The risk of fatigue. Participants in the study must be able to physically tolerate an interview session of approximately 60 to 90 minutes. The PI believed that study participants who meet the inclusion and exclusion criteria should be able to complete the interview without difficulty. No alternate interview approaches were planned for the study. Participants were informed at the start of the interview that they can stop at any time or decline to answer any question. The PI planned to stop any interview if a participant was fatigued or had having difficulty answering any question. This step was not necessary. She built a probe in the guide to ask participants if they wish to continue in the interview.

The risk of emotional upset. Study participants may become emotionally upset or distressed while discussing their personal experiences. The PI mitigated this risk by allowing participants to refuse to answer any distressing question, or stopping the interview at any time. The PI provided participants with telephone hotline information that they could call for further support with any emotional distress.

The risk of loss of privacy. Study participants were asked questions that reveal personal information about themselves. The PI has an obligation to protect participants' privacy to the very best of her ability. She anticipated that one way to protect their privacy was interviewing participants in a private place. The PI ascertained if the clinic sites could provide a private space for interviews. The PI informed participants that the only other individuals who viewed participant responses in tape or transcript form were a professional transcriptionist and her research supervisor and/or other dissertation committee members.

The risk of loss of confidentiality. The loss of participant confidentiality was minimized through study procedures designed to de-identify research material and restrict access to data.

Eighteen different types of personal information are recommended for de-identification by the National Institute of Health (NIH) (2011). Some examples of personal information include names, birthdates, geographic addresses, phone numbers, facsimile numbers, electronic mail addresses, social security, health insurance and medical record numbers (NIH, 2011). The PI recorded only birthdates and ages. Participants were identified by a pseudonym that they chose for themselves. The self-selected participant pseudonym was used to label recordings, transcripts, and files within NVivo 9. Raw data recordings and any material with participant information were kept separate and transported from participant interviews in a locked briefcase. Data tapes and transcripts were locked in a safe in the PI's home with the combination known only by the principal investigator. Data analysis was done on a Hewlett-Packard Pavilion dm4 laptop computer that has both password and fingerprint access known only by the PI.

Any reported hypertensive symptoms. The PI anticipated that participants would be retrospectively describing their perceived BP changes and corresponding self-management. The potential existed for participants to come to an interview actively experiencing symptoms of high or low BP. The PI did not measure BP levels at the interview and was not equipped to perform any clinical evaluation or management of symptoms. The PI planned to ask any participants with active symptoms of BP changes at an interview if they wished to proceed with the interview and call their primary care provider. This plan was not necessary as participants denied symptoms at the time of interview.

In summary, participants in the study were expected to be exposed to low or minimal risk. The anticipated risks for individuals participating in the study were expected to come from fatigue, loss of confidentiality and privacy, and any active symptoms of BP changes.

Strengths and Limitations of the Study

Strengths of the Study

Procedures for study trustworthiness. A strength of the study was the inclusion of procedures of ensure rigor and trustworthiness. Lincoln and Guba's (1985) trustworthiness criteria were developed in response to a need for an alternate set of criteria to assure study rigor in qualitative research. Trustworthiness is the degree to which the study findings are worth attending to and consists of four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Lincoln and Guba's four trustworthiness criteria and the corresponding procedures for the study is defined and described in detail.

Credibility. Credibility is the degree to which the interpretations of the study investigator are truthful or credible (Lincoln & Guba, 1985). There is a lack of consensus of a recommended definitive set of procedures to establish credibility. Two procedures were used in the study to assure credibility: prolonged engagement, and peer debriefing (Creswell, 2007; Lincoln & Guba, 1985).

Prolonged engagement. The first procedure to assure credibility in the study was prolonged engagement of the PI with both study participants and the actual study data. One type of prolonged engagement was the PI spending prolonged periods of time with participants to build trust and rapport and ensure their voice was being heard and understood with the opportunity to clarify misconceptions (Creswell, 2007; Lincoln & Guba, 1985). The PI estimated that she engaged with participants in face-to-face interviews for at least one hour. A second type of prolonged engagement was with the data transcripts and during analysis. The PI spent many more hours reading, rereading, coding and analyzing the transcribed interviews.

Peer debriefing. Peer debriefing is an external check on the entire research process between the PI and a peer (Creswell, 2007; Lincoln & Guba, 1985). The peer is an individual external to the study who is charged with asking “hard questions about methods, meanings, interpretations and provides the investigator an opportunity for catharsis by sympathetically listening to the investigator’s feelings” (Creswell, 2007, p. 207). The “peer debriefer” assumed a “devil’s advocate” role to explore other interpretations supported by the data that were not apparent to the PI in her own analysis. The exploration of multiple interpretations between the PI and the peer debriefer yielded study results that are credible interpretations of the experience. The PI anticipated that her peer debriefing would be with her research supervisor and/or other faculty members on her committee at regularly designated intervals throughout the data collection and analysis process. The peer debriefing sessions were documented in writing, dictated, and stored in NVivo 9.

Transferability. Transferability represents the extent to which a reader of a study can draw inferences to his or her own context or situation (Lincoln & Guba, 1988). The primary responsibility to prove that one study is transferable to another context or situation lies with the “receiving” investigator (Lincoln & Guba, 1985). The original study or “sending” investigator is charged with providing thick data descriptions to permit other investigators to make inferences for their own study contexts (Lincoln & Guba, 1985). The PI provided thick descriptions of her research findings that illustrate any overarching themes found that describe the dataset. Transferability can also be ascertained by the “receiving” investigator through the “sending” investigator’s field notes and coding descriptions.

Confirmability. Confirmability is the extent to which the interpreted study results (product) are based on the views of the participants and not the investigator (Lincoln & Guba, 1985). The evidence for the confirmability of the study results can be demonstrated in two ways. First, the PI established an audit trail comprised of multiple types of evidence (raw data, field notes, coding and analytic descriptions, self-reflective journal and methodological decision entries). These forms of evidence are collected throughout the course of the study and are made available to individuals external to the study to permit independent judgments of study confirmability (Lincoln & Guba, 1985). The intent behind maintaining an audit trail in the study is to make the process and discovery of results as transparent as possible. The PI was a doctoral student conducting the study under the supervision of her doctoral advisor and committee members. She anticipated that a member of her committee would act as an external reviewer to review the audit trail.

The second method to demonstrate study confirmability is through data coding and establishment of themes by two independent reviewers. The PI and designated member(s) of her committee developed themes independently of one another and meet to establish concurrence. Any differences in codes, themes, and labels were discussed until the PI and her designated committee reviewer(s) establish concurrence. The intent behind the review of study themes by two independent investigators is to have “an external check” on the interpretive coding and analysis process (Creswell, 2007, p. 211). Concurrence among independent investigators also demonstrates the stability of the established codes and themes in the study.

Dependability. Dependability is the extent to which the study results can be replicated using the same methods (process) in the same or similar participants (Lincoln & Guba, 1985).

The dependability of the study results can be demonstrated in two ways. First, the PI audiotaped the participant interviews. She verified the transcribed data against the raw interviews. The act of memorializing the participants' experiences on tape and verifying the data transcripts permits the study to be replicated by the PI or others. The second method to demonstrate study dependability was through an audit trail as described in the previous section on study confirmability.

The use of NVivo 9.0 qualitative data software (QSR International, 2011) in the study facilitated the development of the audit trail through the organization and storage of several key sources of evidence. Study transcripts for each interview were stored per participant and linked to the corresponding study field notes, self-reflective entries, and methodological and coding descriptions. The NVivo software has the capacity to log all data analytic actions during a coding session. The PI realized that the data analytic software is not a substitute for data analysis and the ongoing writing components of the study. She understood that the data analytic software was a multifunctional tool to facilitate and store the multiple components of the study.

Study trustworthiness in qualitative research was essential to assure the rigor and quality of the results. The PI adopted the four criteria of study trustworthiness (credibility, transferability, confirmability, dependability) and the corresponding procedures set forth by Lincoln and Guba (1985) to assure that the study is sufficiently rigorous in both the process and resulting product.

Limitations of the Study

The limitations of the study lie with the accrued participant sample and the PI. The central purpose of a qualitative inquiry is to describe, understand, and interpret human experiences and phenomena (Creswell, 2007). The limitations of the study for the study sample

were considered relative to their experiences. First, an inclusion criterion for the study was the age range of 18 to 65. The intent of sampling younger participants was to elicit descriptions of the phenomenon in a population who were expected to be able to participate in the interview process and be free of most other chronic illnesses. The PI may include adults over the age of sixty-five in future research. Secondly, the women who agree to participate in the study may have different experiences than persons with HTN who decline enrollment. The PI anticipated being able to use the study results to design future research with the inclusion of a larger sample to reach more persons with variable perceptions.

The PI herself limited the study in three ways. First, she selected the participants for a purposive sample. The goal for an adequate sample is to consist of an equal number of European and African American females. The PI could have influenced the findings based on who she recruited into the study. Secondly, the quality of the study data is reliant on the interviewer (Creswell, 2007). The PI adhered to the study data protocols, rehearsed interviewing techniques and worked closely with her research mentors to ensure that her analysis and interpretations represented the participants' voices. Finally, the PI came to the study with her assumptions, beliefs, and understanding intact. She had to rigorously adhere to self-reflective journaling and peer debriefing procedures. The PI could have strongly impacted the results of the study through the choice of participants, adherence to protocols, and the influence of her preexisting beliefs. There were two ways for the PI to represent the participants' voices and experiences and deemphasize her influence. First, the scrupulous adherence to the study procedures demonstrated the actions and intent of the PI to emphasize the participants' voices. Secondly, she maintained constant vigilance as to her own attitude and the possible influences on the study results. The PI

demonstrated her intent through self-reflection, listening to interview tapes, and peer debriefing sessions.

Timelines. The PI expected to complete the study within twelve months. She expected to be able to begin data collection in April, 2012 after securing the required approvals from the Wayne State University IRB and the Graduate School. The PI expected to complete data collection by July, 2012. Data analysis commenced with recruitment and data collection as concurrent activities. The PI believed she can complete data analysis activities by October, 2012. She anticipated preparing for and presenting the final defense of this study in December, 2012.

Feasibility. There are two factors that supported the feasibility of the study. First, the aim of the study is singularly focused on the experiences of women with HTN self-managing their perceived BP changes. The PI was not exploring additional questions or seeking additional data from participants. Secondly, the PI knew that women with the requisite experience were in the community from her clinical practice experiences.

There are three factors that the PI acknowledged that could impact the feasibility of the study. First, participants with the requisite experiences needed to be sufficiently articulate to discuss them with the PI. The ability of participants to articulate themselves did not become fully known to the PI until the actual interviews. Secondly, the PI needed a private place to interview participants. The PI did not obtain the participant's own story in her words if she was accompanied by a family member or is interviewed in her home. Finally, the PI herself could have impacted the feasibility of the study with her clinical experience as an NP. She was versed in performing clinical interviews with persons with cardiovascular disease. She obtained salient details of the patient's complaint to support or refute a differential diagnosis. As an investigator,

the PI had to cede control of the interview to participants to allow them to tell their own stories in their own way with their own words and details.

In summary, the study was expected to pose minimal risks to participants and was feasible for the PI to complete within a 12 month period. The completion of the study relied on the research skills of the PI and the ability of the recruited women to share their stories managing perceived BP changes.

CHAPTER FIVE-FINDINGS OF THE INQUIRY

The purpose of this phenomenological study was to describe the experiences of self-managing perceived BP changes in women with HTN. Thirteen women were interviewed to understand their experience living with perceived BP changes. Participants were interviewed once using a semi-structured interview guide with three open-ended questions (i.e. “what is it like living with high blood pressure”, “what is happening when you feel this [symptom/sensation]”, “what do you do when you feel this [symptom/sensation]). The textual data was analyzed using a two-part strategy based on van Manen’s (1990) method that was described in Chapter 4. First, the central theme of the study and four interpretive subthemes were identified from the texts. Secondly, van Manen’s (1990) four existential themes were used as guides for further reflection to add more depth to the interpretive themes and gain a deeper understanding of the participants’ experiences. The purpose of this chapter is to present a description of the participants, the essential central and subthemes, and the four existential themes that emerged as results of this study.

Description of the Participants

The sample of thirteen women was recruited using a purposive sampling strategy. The principal sampling criterion for inclusion in the study was that participants could tell that their BP changed by experienced symptoms and/or sensations. The women were between 26 to 59 years of age who had HTN for at least two years, took antihypertensive medication, were born in and lived in the United States as adults. All participants were screened using the Mini-Cog

screening (Borson et al, 2000) and achieved a three-word recall score of >1 and passed the draw-the-clock test.

The group of participants were generally middle-aged ($M = 50.53$ years, $SD = 9.62$ years), had several years of experience living with HTN ($Mdn = 10.00$ years), and were well educated ($M = 14.91$ years, $SD = 1.91$ years). Ninety-three percent of the women had an annual income of less than \$24,999. Many participants had comorbid illnesses such as asthma, diabetes, kidney disease, prior stroke or transient ischemic attack, and migraines. The participants' characteristics are described in the following table.

Table 1

Study Participant Characteristics

Name	Race	Age	Years with HTN	Education	Annual Income	Comorbid Illness
Aimee	Caucasian	59	10	High School	\$15-24 K	None
Angel	Caucasian	26	3	Some College	\$5-9.9K	Diabetes
Beverly	Caucasian	56	10	Some College	\$15-24 K	None
Coco	Caucasian	55	10	Some College	\$1-5 K	Asthma
Daneice	AA	55	25	Some College	\$15-24 K	Asthma Diabetes
Emma	AA	53	4	Bachelor's Degree	\$15-24 K	None
Johnny	AA	58	11	High School	\$10-15K	None
Mary	Caucasian	53	4	High School	\$1-5K	None
Mitzi	AA	52	36	Some College	\$5-10K	CVA, HLD

Red	AA	56	3	Some College	\$5-10K	CKD COPD, HIV
Sarah	Caucasian	55	8	Some College	\$5-10K	Diabetes
Victoria	AA	38	6	Post Graduate	\$25-50K	TIA
Yvette	AA	41	10	Post Graduate	\$15-25K	Pseudotumor Migraines

Legend: AA = African American; K = Thousands; CKD= Chronic Kidney Disease;

HLD = Hyperlipidemia

Essential Themes and Life World Existentials

For van Manen, themes are the “forms of capturing the phenomenon one tries to understand” (1990, p.87). van Manen (1990) considers a theme to be essential when the phenomenon loses “essential meaning” if the theme is absent (p.107). The PI discovered one central theme and four subthemes that comprised the essential themes of the current study. The themes are discussed in detail in this chapter.

All life worlds, according to van Manen (1990), have common existentials regardless of culture, ethnicity, socioeconomic characteristics, and physical and psychological status. van Manen’s (1990) lifeworld existentials include lived space (spatiality), lived body (corporeality), lived time (temporality), and lived others (relationality). The lifeworld existentials were used as guides for further reflection of the textual data beyond the essential themes. The life world existentials are discussed in this chapter following the essential themes.

Essential Themes

One essential central and four subthemes emerged from the participants’ stories following thematic reflection of the textual data. The themes comprised the structure of the participants’ experiences of self-managing their perceived BP changes. The central theme

articulated by nearly all the participants is “getting to normal”. The subthemes characterize the participants’ experiences when they felt their BP was not normal in terms of how they knew, what they did to take care of the abnormal BP at the time and caring for themselves on an ongoing basis. The four subthemes are (a) “I can tell”, (b) “tending to it”, (c) “the wakeup call”, (d) “doing it right”. The central theme and the subthemes are described individually. The term “blood pressure” was often referred to as “it” in the texts by many participants.

Central theme: Getting to normal. “Getting to normal” emerged as the central theme from the women’s stories as they wanted their lives to get to normal by getting their BP to normal. The women needed their BP to be normal so that they could live normally. The reason why many participants wanted and needed controlled BP was that they were able to feel “normal” and in turn live normally. For example, one participant stated “if I take the medicine every day, I feel like I’m normal. I have normal blood pressure” (Beverly, 380-381).¹ A second participant echoed a similar sentiment:

As long as my blood pressure's doing fine, it's not high or anything, it's a normal level, it's like living any other pattern, like I was before I had high blood pressure.

I can't tell no difference until it starts getting high (Red, 18-22).

Many participants did not feel well when their BP was not normal. When they did not feel well, some women could not do what they needed to do in their daily lives. One participant described how she felt before and after getting her BP down:

¹ Citations to data source follow the convention of participant pseudonym and line number in interview transcript.

I mean I could tell right away ‘cuz like I literally...to me it’s a miracle. I don’t have headaches anymore and I had them all the time. I mean I would not be able to function for...and it’s difficult when you have five kids for, ya know have a headache for two days but I was like that. Now I don’t at all (Beverly, 270-274).

One participant cited how she could not do her usual activities because of headaches caused by her high BP:

I cannot do the things that I do because of the feeling I get from my blood pressure being too high, which is I be too tired to do anything. I get a headache. I get a bad headache. I mean, my head be pounding (Red, 80-83).

The women had jobs and other responsibilities as students, wives, mothers, and grandmothers. They needed to have normal BP to feel and be normal to live their daily lives.

Returning their BP to normal was important to many participants to avoid catastrophic outcomes. Many participants voiced real fears about their BP causing damage and disability to their bodies when it changed from normal. One participant was concerned about the “blood covering her brain” when her BP was too high (Johnny, 534-536). Other participants were concerned about having strokes as a result of their BP. One participant stated “I always think about, You know what? You’re going to end up having a stroke if you keep on wearing down your blood pressure system” (Emma, 138-140). Three other participants had similar fears about having strokes from their BP (Aimee, 43-46; Coco, 339-341; Johnny, 731). Another participant who had a previous stroke was concerned about kidney failure “I’ve already had a stroke, and I don’t want to have a...to go into dialysis because it could also begin to affect my kidneys” (Mitzi, 225-226). A participant, who had two transient ischemic attacks in her early 30s, was

more concerned about the consequences of having a stroke “I’m not morbid, but having a stroke and not dying it from it. I don’t wanna have a stroke and survive, because I’ve seen that” (Victoria, 698-699). Many women were aware of and feared the major catastrophic diseases such as stroke and kidney failure associated with BP that was too high. The key for these participants to avoid these negative consequences was to get their BP to normal.

Many participants needed to return their BP to normal to enable them to live long lives and meet their personal goals. A common desire described by some of the participants was to live to see their grandchildren grow up and thrive. One participant stated “I want to live a long time to be with my grandchildren” (Aimee, 42-43). A second participant had the same desire to be around for her family (Mary, 397). A third participant wanted to live a long life to see her family grow up and wished she did things differently earlier:

My goal is really to take care of myself, see my grandkids get older, because it was like, if I woulda took care of myself, like I said, like ten years from now, I don’t think I woulda been in the predicament I’m in now (Daneice, 885-888).

A couple of the younger participants had different but important goals for themselves and needed to be healthy. One participant, a 26 year old student, stated:

I still want to live and I still want my college degree, and I want to be able to walk across my stage, and do all that fun stuff. I know if I’m sick, I can’t do any of that (Angel, 482-486).

Another participant, a 38 year old social worker, shared these concerns:

I wanna live my life to the fullest until the day I die, and I can’t do that always worrying about, is this gonna raise my pressure, or if this is gonna raise my

pressure. I just wanna enjoy life, and right now I'm really nervous (Victoria, 240-243).

Many women in the study wanted to live a long time as well as living as normally as possible. The women realized they may not be able to achieve their goals and live their lives as they desired if they were sick and/or disabled from high BP.

In summary, the essential central theme of this research study expressed by many participants was "getting to normal". When their BP was not high, they felt well enough to engage in their usual activities, and lessen their risk of catastrophic health problems. When they had normal or near normal BP levels, the women could feel and be normal and hoped to live long lives.

Subtheme: I can tell. The subtheme of "I can tell" emerged as stories from the women indicated that they could tell when their BP was not normal. They could tell that their BP was not normal because they felt different changes in their bodies. For all the women, these body changes indicated that their BP was higher than normal. Only two participants could tell when their BP was too low. One participant found "Usually when I feel dizzy, it means there's a drop in my blood pressure" (Angel, 38-39). The other participant stated:

When I was taking all the medications that they were giving me for my blood pressure, it bottomed me out, which means it had my blood pressure get so low that I was almost comatose. It had got all the way down to...it was like 60...50 was the bottom number, and the top number, I think was 80 or something like that. It was really, really, really low. Then I was very faint (Mitzi, 483-489).

The participants considered their BP to manifest body changes and sensation as it changed. They also believed that their BP was aggravated by exposure to specific triggers such as stress, emotional situations, and eating. Many participants were able to recognize that their BP was changed based on their experience of living with high BP and knowing their bodies. Some participants described being very sure that they could tell their BP was high. The participants' knowledge of their bodies, body changes, and triggers, and belief of being sure are described separately.

I know my body. Some participants relied on their knowledge of their bodies to help them tell when their BP was high. One participant felt that knowing her body helped her to recognize changes in her body:

I think it's real important because you hafta be able to know...to me you hafta be able to know your body and what's causing what. If you're gettin' a pain somewhere there's a reason for it. This way I know (Coco, 486-490).

Another participant described how knowing her body helped her distinguish different changes from different diseases "I know my body. I know when it's my blood pressure. I know when it's my diabetes" (Daneice, 310, 311-312). Another participant described how her body captured her attention "For me, I think you have to pay attention to what your body is saying to you, and I know" (Victoria, 68-69). These participants relied on their knowledge of their bodies to as a basis to help them be able to tell that their BP was high and make distinctions from other problems.

Body changes. All participants reported body changes that helped them tell that their BP changed. Their body changes were physical in nature and included headaches, vision changes,

turning red, swelling, dizziness, feeling their heart beat, feeling tired, feeling and/or hearing the blood rush to their heads. Some participants experienced a sequence of changes that progressed as their BP changed. The individual body changes are discussed followed by the participants' sequences of changes that occurred with BP changes.

Headaches. Headaches were the most frequently reported body change of their BP. Many women found that their headaches were severe and distressful. For example, one participant noted that “when I feel the headaches, it’s [BP] usually up” (Angel, 39). She further noted that, “Well, with the headaches, you can’t do much when your head hurts really bad” (Angel, 29-30). Similarly, Another participant “when I get a headache I know that it's up. Now, when I start to hear it I know that it's a lot higher than just up a little bit” (Coco, 335-336). Two participants had a similar experience when they noticed their BP changed when they had a headache (Mary, 192-196; Red, 58). Another participant described her headaches differently;

It’s just like I get really bad headaches and it feels just like pressure is just building and then I also feel kind of like I’m in kind of like a fog...like it’s hard to explain but kind of a cloudy, cloudy feeling (Beverly, 115-117).

For many participants, the location and frequency of headaches were important indicators that their BP had changed. The location of the headache was indicative to one participant “Every time it's at the top of my head that's my blood pressure goin' up” (Coco, 493-494). In her interview, another participant pointed to the back and sides of her head to illustrate the location of her headache and stated “It feels in your head. You know even on the top” (Mary, 241). A different participant had her headaches from high BP occur in a different location from other headaches:

For me, it's the location. When it's my blood pressure, the headaches are in the back, and it's usually the back part of my neck. If I just have a headache, a tension headache or a sinus headache, it's usually in the front (Victoria, 451-454).

Some participants noticed that they had constant headaches during periods when they were without antihypertensive medication. One participant remembered before she was diagnosed and prescribed antihypertensive medication "I start getting a headache, continuous headaches" (Mary, 35). The same participant related, "I went to my doctor. Told him I kept getting a headache, and they told me it was from high blood pressure because my blood pressure was on the borderline and then it got high" (Mary, 89-91). Another participant noticed an increase in her headache frequency during periods when she took less antihypertensive medication:

Now if I got that headache I would be 100 percent sure that's what it is but I really don't get them anymore. I just did that one month...that one span when he tried to change my medication, I started getting...ya know 'cuz before I would have maybe at least one a week and then a really bad one once a month...like a really bad one. Now, I literally don't get headaches and in that three-month period I was getting them like almost on a daily basis (Beverly, 307-313).

For the majority of participants, headaches were their cardinal body change that their BP was higher than from normal. For some participants, the severity, location, and frequency of their headaches were key characteristics that participants used to recognize that their BP had changed.

Vision changes. Vision changes were another frequently occurring body change indicating their BP was higher than normal that was reported by more than half of the participants. Vision changes often occurred alone or in combination with body changes.

Participants experienced a wide variety of visual impairments they attributed to their BP change.

One participant described her vision changes as:

Sometimes I have a little blurriness that's occurring. It seems like I have like a...it's like a little white cloud that comes up in my eye, and I always try to wipe it off. It seems like I have like a little sleep in my eye, but I know it's not sleep (Mitzi, 127-131)

Vision changes were frequent bothersome body changes for many participants. Many women experienced unique visual impairments beyond blurriness they used as indicators of a rising BP.

Turning red. Three participants flushed and turned red in the face when they thought their BP was changing. One participant reported “when my face turns red. Everybody will say, ‘Aimee, your blood pressure’s up again’ (Aimee, 124-125). Two other participants reported how they would get angry and turned red when they felt their BP go up. For one participant “turning red...whatever. Then I know, stop [being angry]. That’s internal damage. That’s not good for you. Stop [getting angry]” (Emma, 280-282). After an argument or heated discussion with a family member, another participant described:

If I would get on a phone and say I have an argument with one of my kids or something, or something doesn't go right, my blood pressure would shoot right up cuz I have a thing when I take it at home. I'll get all red in the face, and my husband will say, 'Calm down. Calm down.' You know you can tell when it's [BP] shooting up (Mary, 147-154).

Turning red was a body change that was felt by the participants but revealed the BP change to friends and family.

Swelling. Some participants noticed that they had swelling that occurred with BP changes. One participant noted that “I retain a lot of water” when her BP got higher . (Johnny, 925). One participant reported “Generally, I’ll have a headache. My eyes get a little blurry. My hands begin to get sweaty like, and swell up” (Mitzi, 64-65). Another participant reported this combination of changes “it’s also, okay, my fingers are swollen. I was a little dizzy, and then I have this headache, so it’s all like...this is all connected” (Victoria, 532-533). Swelling was a body change of elevated BP for some participants.

Dizziness. Some participants experienced a sensation of dizziness when their BP was higher than normal. One participant reported “I feel, like, dizzy, dizzy, light headed. I had to call the ambulance one time for my blood pressure because it was so high” (Red, 68-70 Another participant described her dizziness differently “It’s like a slight dizziness some...yeah, a slight dizziness. It’s like an imbalance. It’s [BP] high usually, at that point. It’s [BP] high” (Victoria, 428-429, 433). Dizziness was a troublesome sensation of elevated BP as participants felt unbalanced or unstable.

Feeling tired. Feeling tired was a frequently occurring sensation that many study participants used to tell that their BP had risen. Participants were often bothered by lack of energy that occurred alone or with other body changes that indicated BP changes. The participants had described their lack of energy in different ways. One participant was bothered when she could tell her when her BP was high “I know that I didn’t have the energy or drive to do anything” (Sarah, 155). Another participant described a different combination of changes when her BP was high “yeah, I noticed the difference. I wasn’t as...taking all the medications, of course, it has you urinate frequently, and also I wasn’t as...I want to say really slow, like I

wasn't peppy, like motivated" (Mitzi, 516-520). Three participants had similar experiences of described feeling "drained", "extremely" or "very" tired when they thought their BP might be high (Aimee, 123-125; Red, 62-63; Victoria, 443-445). Lack of energy or feeling tired was a common sensation seen by some participants as an indicator of their BP changes and often occurred in combination with other body changes.

Feel my heart beat. Some participants felt a sensation of their feeling their heart beat when they could tell their BP was high. The women reported that this sensation was both troublesome and frightening as they were concerned about their hearts. For example, one participant noticed "another thing I notice too that I just thought of is my heart will kind of...I call it palpitate. It kind of fluctuates. I do feel that too" (Beverly, 220-222). The same participant was scared by her heart beats "Ya know I'm not sure what's going on there if you feel your heart palpitating. It's kind of scary too" (Beverly, 383-385). Another participant felt her heart beat with her headaches when she thought her BP went up "when I feel the headache, that's the pressure that's in the front and I go get an aspirin because your heart races. You can feel your heart palpitation and you feel your head getting that pressure in it" (Johnny, 474-476). The women were both bothered and frightened when their heart would beat or race when their BP was higher than normal.

Hearing or feeling blood rushing to my head. Some participants described a sensation of hearing or feeling their blood rushing to their head when their BP was going up. One participant described her sensation as "I can hear it [BP]. It seems like it's [BP] going...it's high. I can hear it [BP] actually beating in my head and my ears" (123-124). Another participant was bothered and uncomfortable when her BP was rising:

If you lay flat, you will be awakened because you can feel the blood rushing to your head. You hear pounding, sometimes a washing machine, sometimes a knocking, things like that wake you up in your sleep, which is a blessing because it keeps from that blood rushing all in your head. You have to have your head elevated (Johnny, 112-117).

The two women experienced a literal sensation of their changing BP.

Sequences of changes. Some participants experienced changes that occurred in a sequence as their BP got higher. For example, one participant described this sequence of changes in a “pinpoint dot” in her eye that got bigger as her BP changed:

Your vision gets a little blurry. Sometimes you can turn your head real fast and when your pressure's up it's a delay in the head. After you turn your head, you're still waiting on your vision to come with you. And that's when it's very high. In the back of my head I can feel the pressure. You can feel the pressure. It's like you need to massage your neck (Johnny, 415-418, 427-129).

A second participant reported a different progression of vision changes when her BP was high:

Well, I've noticed that I get this...like my vision it'll get...my eyes it'll just pop up. It'll get real dark, and then I'll get these silver fluttery things. Then what'll end up happening after that is I can't see (Coco, 57-60).

Another participant described her progression of body changes:

The first thing that happens when my pressure goes up is the tightness in my hand. A lot of people say that it's like water retention or whatever, but I know when my fingers swell that my pressure is up. If I don't tend to it right away, then

I start getting the tightness in my neck or the headache will follow, and then I'm really tired. (Victoria, 126-131).

All the participants experienced at least one body change or sensation that made them aware that their BP had changed. Some participants described a sequence of changes that progressed with their rising BP.

In summary, the women reported body changes that they used as indicators to help them tell that their BP was changed. The majority of the changes were attributed BP getting higher than normal. Most women experienced more than one change and/or sensation to inform them that their BP might be high BP. Many women appeared to rely heavily on their changes to help them "tell" that their BP was different from normal as only one participant checked her BP when she had a headache. Body changes were important but were not the only indicators the women used to help them tell that their BP was away from normal. Many participants reported triggers that they used to help them tell that their BP had changed. The participants' triggers (stress, emotion, and food) are described in the following paragraphs.

I know my triggers. Many participants described how they could tell that their BP was getting higher during or after exposure to or engaging with triggers. One participant described "triggers" as:

I know what could trigger my blood pressure. I know foods that can trigger it. I know situations that can trigger it, and I've been working really hard at trying to minimize some things, and trying to keep my stress level down so that my blood pressure won't rocket sky high (Mitzi ,252-257).

The participants' triggering situations and/or behaviors that they associated with higher BP included stress, emotions, and food. Each of the participants' triggers are discussed separately.

Stress and emotions. Many participants could tell their BP got higher when they were stressed or in an emotional situation. One participant describes how she and others are aware of her BP when stressed at work:

The job I have, there's three of us at work and they'll go, 'Aimee, your blood pressure,' because I get real anxious. You get very anxious and then I start talking fast. Then they'll look at me and they'll say, 'Your face is red. Your blood pressure's up.' I can already feel it within myself. If I start getting anxious or upset or hurried, I know my blood pressure's going up (Aimee 136-141).

Similarly, another participant could feel her BP when she was stressed "I can tell when I'm getting stressed to the point where it's messing with my blood pressure. I have to talk to myself and calm myself back down" (Johnny, 634-636). A different participant recalled a conversation she had with her doctor about the stresses of being unemployed:

She told me I could have the perfect diet, I could have a diet that's like they would feed you in the hospital, with no sodium. But because my headaches and my blood pressure goes up with stress, the stress of my job search was elevating my blood pressure (Yvette, 659-662).

Stress, whether self-imposed or through life events, was unavoidable for many participants. They were aware of their blood pressure going away from normal in response to stressful triggers.

More than half of the participants described becoming upset and/or angry as triggers for raising their BP. One participant noted that "If I start getting anxious or upset or hurried, I know

my blood pressure's going up" (Aimee, 140-141). Four other participants had similar experiences of feeling their BP "shoot" up when they were angry or upset (Daneice, 142-144; Emma, 114-116; Johnny, 80-83; Red, 354). Another participant described how her BP was rising while driving:

When I'm driving because if I'm driving, and I get frustrated because someone is doing like a road rage thing, I can feel my blood pressure going up because it's like well, I really don't have no control over it anyway, but it's like I'm driving and all of a sudden, I'm thinking, 'Well, why are they doing this?' When I'm getting myself in this anxiety moment, that I can just feel like blood rushing up to my...you know, I can feel it rushing up to my head, and then my head sort of throbs a little bit. (Mitzi, 92-99).

Highly emotional situations often triggered BP changes for many participants. The women often felt their BP elevate when they were angry and/or upset.

Foods. Eating foods with fat and/or salt were an identified trigger of BP changes for some participants. One participant reported "Because I like every now and then a little foods that I shouldn't have, I guess, and I can't enjoy them. A bag of chips will run my blood pressure up" (Johnny, 45-47). Similarly, another participant worried about what she ate "I have to worry about some of the things that I eat because that could trigger my blood pressure to go up high, if I'm eating too much salt, eating too much seasoned food, eating food that is spicy" (Mitzi, 17-19). A different participant had trouble eating fatty food:

I've noticed that sometime when I eat some things, like that butter for your lobster tail, by the time I get home, I'll be like, okay, I gotta take a pill and lay down, because I know that butter was not a good idea (Victoria, 385-388).

Some women knew that eating foods that contained salt and/or fat was problematic in terms of raising their BP. The women needed to be cognizant and vigilant of what they ate to avoid triggering an undesired BP change.

Many participants voiced different degrees of being sure to that they could tell their BP changed. Some participants were very sure that their BP was elevated when they experienced their body changes. One participant was very sure about knowing her BP was high:

I be very sure, because the sinus...there's the sinus...when I spray the stuff up my nose and take the Singulair, it would stop. When I take Tylenol and stuff like that, it don't work. That's how I know I got it [high BP] (Red, 184-186).

A second participant was also very sure about knowing when her BP was changed headaches “Yeah. I'm like 99 percent sure, especially about the pressure part. I may toggle back and forth between my son stressing me out and the sinus headache, but when it's in the back, I know what it is” (Victoria, 542-544). Two other participants were very sure they could tell their BP was the cause of their headaches and not sinus or migraines (Coco, 470-472; Mitzi, 124-126). For the four participants, they were sure that they knew what was wrong and that their BP was changed by their body changes.

Other participants were not sure that they knew their BP was changed when they felt body changes. One participant had several changes in her body that were not always due to her BP “No. I'll say this, not all the time. I don't think it was high blood pressure all the time. It

probably had a lot to do with my blood sugar and what I was eating” (Sarah, 463-465). One participant contradicted herself with her experiences about being sure. She made a statement about being right about her BP “nine times out of ten” (Red, 545-546). She then reported this experience when she went to the doctor:

Sometime my pressure could be a little high and I won't even know it. They'd be like, 'You know your pressure a little high?' I was like, 'How high is it?' He was like, 'Oh, it's not that high, but it's kinda high. Did you take your medicine?' I be like, 'No, I didn't take it this morning,' I said, "but I will take it when I get home (Red, 681-686).

Many women in the study had varying beliefs about “how” sure they were that they could tell their BP changed. The beliefs about being “very sure” may be strong but not necessarily consistent for some women.

In summary, all participants could tell that their BP was different from normal. Many women relied on their knowledge of their bodies to recognize when their BP was not normal. Many women could tell that their BP was changed by their body changes and after exposure to triggers such as stress, emotion, and food. Many women were also ‘sure’ to varying degrees that they could tell that their BP was high. The ability of the participants to recognize that their BP changed was an important initial step in getting their BP and themselves back to normal. Their awareness of their BP change was followed by a series of actions that are described in the following paragraphs entitled “tend to it”.

Subtheme: Tending to it. The subtheme of “tending to it” was discovered from the women’s stories as all described the actions they took to “tend” to themselves when they were

experiencing changes from BP that was different than normal. One participant best characterized this subtheme when she described "If I don't tend to it right away, then I start getting the tightness in my neck or the headache will follow, and then I'm really tired" (Victoria, 129-131). Some of the "tending" actions taken by participants that focused on relieving the BP change included making sure, calming down, being still, taking extra medicine, and going to the doctor. These actions are discussed individually.

Making sure. Some participants sought to make sure their BP was changed when they experienced body changes and/or triggers. Participants used several different actions to make sure that they had BP changes. Their actions included (a) checking my BP, (b) taking medicine, and (c) seeing the doctor. Each method is discussed individually.

Checking my BP. Many participants would measure their BP by any available means when they experienced their body changes, or triggers. One participant kept a diary in which she recorded her BP at certain times of the day and when she did not feel well. She described how she connected her symptoms to elevated BP measurements:

I would feel really crappy if my pressure got in the 200s with a medium-hundred number at the bottom, and I would know that that's all that tension and pain in my neck because my pressure is so high. It's [BP] like 150 over 90-something and I feel a little sluggish, a little dizzy, then I would...that's how I would make the connections of what my body was trying to tell me and what my numbers was during the time I kept that diary (Victoria, 506-513).

Similarly, three other participants also made sure their BP was elevated by checking their BP with portable BP monitors (Angel, 104-105; Mary, 264-266; Mitzi, 132-138). Another participant reported how she used her BP cuff when she did not feel well:

For a while they was telling me to take it [BP] every day. Now I take it when I'm not feeling well. If I wake up in the morning and I'm not feeling well, whether it's a headache or just feeling really tired or whatever, I try to see if it's correlated with low or high blood pressure (Yvette, 559-564).

Other participants did not own a BP cuff but still measured their BP when they were not feeling well or suspected an elevation. One participant went to the local drug store to check her BP when she thought it went up after an emotional incident with a family member:

When you go to CVS or Rite-Aid, they have a self-blood pressure. When I catch myself...like I said, I have taught myself not to go there; just don't go there...I would go and I would get this outrageous number. My blood pressure would be way over. I'd probably be at hypertension. I can't think of the numbers. One time it was 165 over whatever, and that's way too high. Every time that's like a tool that keeps me...you know it's going to increase. It was probably higher than that because it depends on what kind of incident we're having (Emma, 301-311).

A different participant confirmed her suspected BP changes by visiting the nurse located in her residence "How I know is because there's a nurse in the building and I go down there and she will take my blood pressure" (Red, 108-109). One participant who had a feeling her BP might be different but was not always certain discussed going to the doctor to make sure. She stated: "I'm

not 100 percent sure. I just get a feeling that it might be. So, go to the doctor and find out. That's how I'm gonna be sure" (Mary, 259-260).

For many participants, measuring their BP while experiencing body changes and achieved two purposes. Many women confirmed that what they were feeling were indicators that their BP was higher than normal. The body changes then became informational cues for the women to inform them that their BP had changed for that particular and future episodes.

Taking medicine. Participants tried taking over the counter (OTC) medications in response to their body changes. The outcomes of their actions helped them confirm if their BP or another problem was the cause of what they felt. One participant described how she uses OTC pain relievers to determine the cause of her headaches "I take Tylenol and stuff like that, it don't work. That's how I know I got it. That's how I know a high blood pressure headache too, because Tylenol and stuff ain't gonna work" (Red, 185-188). The same participant also reported:

For one thing, I'm having sinus trouble I know it could be that. When it's my sinus trouble I have to check my nose. [Sniff.] If I do that [sniff], it ain't the sinus headache. I take medication for my sinus allergies in the morning. I take that. I would think it wouldn't be that. Like I say, when the nurse is there I go have her take my blood pressure. She'll tell me, 'You're a little high today,' you know (138-144).

Another participant had a similar experience with distinguishing among her different types of headaches:

If I wake up now with a headache because of...sometimes it's just allergies. I could take maybe a couple Motrin. It would go away or at the very worst if the

headache hangs on, one Excedrin and with those (hypertension) headaches...the really bad migraines...nothing worked. Absolutely nothing would take care of the headache and that would be the ones because of the blood pressure (Beverly, 284-290).

A third participant knew when her headaches were due to her BP “Well, for the simple fact that no matter, like I'll take an aspirin or if I take a Tylenol it don't go away” (Coco, 453-454). Participants used the outcomes of their actions to differentially include or exclude possible causes of their body changes. They often did not achieve the desired outcome of relief after taking common OTC pain or sinus medications. The continued presence of headaches led participants to conclude that the cause was their high BP over allergies or migraines.

Asking the doctor. Some participants asked their doctors to help them make sure that their BP had changed. One participant could not distinguish between migraines and hypertensive headaches. She related a conversation with her doctor “I get lots of headaches. I get migraines. Yeah, all of that. Again, I don't know if it is...the doctor said it's the hypertension and the high blood pressure” (Aimee, 287-290). Another participant had severe headaches and did not know the cause until she was hospitalized:

Well, one time I had to go into the hospital because I wasn't taking medication and I had just feeling really horrible...really bad headaches...progressively worse and worse and worse 'til honestly, I'm not sure how I even got to the hospital. I drove myself and by the time I got there my blood pressure was like over 190 and it was really bad (Beverly, 33-38).

Some participants relied on information from their doctors to help them connect their body changes to their elevated BP.

In summary, participants used a variety of methods to help them confirm that their BP or another problem was the cause of their body changes. Trying to pinpoint the precise cause was important to avoid wasting extra time trying to figure out the problem and delay appropriate treatment. One participant described why she needed to make sure “Yeah, it’s very important to look to see what it is, so you can try to fix it, rather than guessing. It doesn’t really work that well if you try to guess and you guess the wrong thing” (Angel, 194-197).

Calming down. Calming down was the most frequently reported action that nearly all the participants took when they felt their BP was getting higher than normal. Many participants thought they felt their BP rise when faced with stress or emotionally charged situations and needed to calm down. One participant described what she did in these situations “Then I sit back and I go, ‘Why did I do that?’ Calm down. Then I have to sit there for a good hour before I can actually feel myself start to relax” (Aimee, 196-198). Another participant described what she did when she felt her headaches:

Well, I think it was to get rid of the headache because I had to function but I think that being...calming down and relaxing and what I would try to do...it sounds weird but I would try to just like get everything out of my mind, like just be like...ya know what I mean? Sometimes the pain, it would subside some if I could do that (Beverly, 352-357).

A different participant needed to calm down when she noticed her abnormal vision changes and stated “What I end up doing is I’ll close my eyes, and I try to de-stress or relax myself or

whatever. Even sometimes when my eyes are closed I can still see it doing it's little number” (Coco, 110-113). Another participant felt her headaches and her eyes turn red when she got excited and thought that her BP went up:

I feel different things, cuz when I'm upset it just...it'll go up, and I don't have a real migraine headache but my eyes will be red, so I know that that's a sign that my pressure is up, that I need to calm down to bring my pressure down, because I'm excited (Daneice, 167-170).

Three other participants described similar experiences about needing to calm themselves down when angry or stressed to avoid a rise in their BP (Johnny, 635-637; Mary, 147-152; Mitzi, 98-101). Many of the women felt their BP rise when facing stress or emotion. Telling themselves to calm down was a common strategy among these participants to relieve their high BP.

Being still. Some participants had to be still by going to bed or sitting down with their BP changes. The most common reason given for being still was that their particular body change or sensation was so distressful that they could not function. One participant illustrated this rationale when she described "I usually try to go to sleep, because, I mean, when a headache gets so bad, there's not really much you can do" (Angel, 73-74). Four other participants had similar experiences and needed to be still and lie down when they did not feel well (Beverly, 567-572; Coco, 271-273; Daneice, 184; Yvette, 280-282). Some participants described the immediate need to be still when they felt their BP go up. For example, this participant reported "I get a cold rag and put it on the back of my head and be still immediately" (Johnny, 460-461). Two other participants described a similar immediate need to be still when they felt their BP increase (Red,

58-61; Victoria, 215-221). For many participants, being still when they felt their BP rise was an important strategy to quickly relieve discomfort and distress.

Taking extra medicine. Nearly half the participants took or were given extra antihypertensive medication when they suspected that their BP was high. One participant described "Sometimes, you can say it's going against doctor's, because they don't recommend this, but sometimes if it's really high, I take a little bit of extra medicine than what I normally will" (Angel, 204-206). Another participant had a different experience when her doctor kept her at the office with a high BP reading "Yes, they gave me medication to bring it down, to bring my blood pressure down" (Daneice, 69-70). Another second participant had a similar experience showing up at her physician's office not feeling well:

I will begin to feel really bad, and my blood pressure will go up really high, and then sometimes it's hard to get it to come down without taking a lot of medicine. Um, and I had experienced my blood pressure getting high, as high as 200 over...I want to say it was like about 190 or so. That was a real, real scary feeling because when I got to the doctor, he didn't want to let me go, and I don't like going in hospitals. He was telling me, 'Well, if we don't get your blood pressure down, first of all, I'm gonna give you some Catapres,' so he gave me the Catapres. Then he said he wanted to give me Dyazide. He gave me Dyazide (Mitzi, 321-332).

One participant noticed a difference after trying her antihypertensive medication after stopping it for several months:

I actually could tell my blood pressure went down. I felt very comfortable again whereas I was up high I felt like I was up high. I felt my head settle down. I

didn't get as upset about little things. Just on that one pill I noticed a difference in me (Johnny, 168-171).

Two participants described how they took extra antihypertensive medicine if they suspected that their BP was high (Red, 240-242; Victoria, 74-78). Taking extra antihypertensive medication was a common action taken by many participants in response to their BP changes.

Going to the doctor. Some participants went going to the doctor's office or the emergency room for evaluation because they did not feel well. One participant was hospitalized monthly for eight months to treat her asthma, diabetes, and HTN. She reported the following experience:

They had to treat all three of 'em, because if...like I say, I have been well one time, like I told you before and my diabetes was under...they got my sugar under control. They got my asthma under control, but it was like my blood pressure was still high, so they still didn't let me...they still kept me in there like an extra day-and-a-half, because my blood pressure was still high (Daneice, 357-363).

A second participant was advised by her doctor to call him or going to the emergency room "if it [BP] gets really, really bad" (Victoria, 199-200). Some participants required treatment from healthcare providers in a variety of settings when they believed their BP may be elevated.

In summary, most women took different actions to immediately "tend to" their BP in order to get it to return to normal. Their actions included making sure their BP was changed, calming down, being still, taking extra medication, and going to the doctor. Many women were directly queried as what they wanted to happen as a result of their "tending" actions. One response from participants was to get or bring their pressure down "I actually could tell my blood pressure went

down. I felt very comfortable again whereas I was up high I felt like I was up high. I felt my head settle down” (Johnny, 168-170). Two other participants had similar expectations to get or bring “my blood pressure down” (Aimee, 502-503; Mitzi, 163-167). Two different participants wanted to get their pressure down and get rid of their headaches (Coco, 294; Johnny; 168-170). Only one participant wanted to get rid of her headache without directly connecting it to her BP:

Well, I think it was to get rid of the headache because I had to function but I think that being...calming down and relaxing and what I would try to do...it sounds weird but I would try to just like get everything out of my mind, like just be like...ya know what I mean? Sometimes the pain, it would subside some if I could do that. If I could just basically just veg out kind of, ya know and just like not think about anything. It would help (Beverly, 352-358).

Many women were looking for returning their pressure to normal and relief of pain and distress as a result of their tending actions. The intent of the women’s tending to their BP was to try and get back to normal as soon as possible. The act of getting their BP back to normal had an important implication of getting themselves back to normal as well. Many women voiced various expectations of their “tending” actions that ranged from getting their pressure down to relieving a headache.

Subtheme: The wakeup call. Some participants got a “wakeup call” that their BP was serious and they needed to take care of themselves. The wakeup call was often a severe health scare or event that got their attention. One participant was scared by her wakeup call:

I just know that when I drove myself to the hospital that day I barely made it in the door. I was gonna pass out and I knew that it was just really bad. I

honestly didn't think it was that bad 'cuz I thought that they were pretty worried about...that my blood pressure was that high when I got in there (Beverly, 193-197).

A second participant's wakeup call was similar as she ended up being admitted to the hospital:

I start back after I leave, get out the hospital, I'll take it (medication). Then I stop again, and then it was so...like I said, I was in the hospital almost a half a year for the same thing. Then I think the last straw was when my sugar was up so high, and she was telling me about how everything's shutting down on me, and they had to put me on a heart monitor. She was like, 'You ain't taking it serious.' I'm like, 'I'm taking it serious now'. I think that was really the wake-up call (Daneice, 442-450).

A third participant described her wakeup call:

My blood pressure was up high, and I said, 'I've got to get serious about this.' That's what the doctor said, he said, 'Because you didn't even realize you had a stroke,' and which I didn't. I was...it took place and I didn't know that I had one. I just knew that I couldn't talk, and I was functioning like I was just normal, until after I got to the emergency room, and they said, 'Well, you know what, you had a stroke, that's the reason why you can't talk. One side of your body was affected, too, your right side. That's the reason why you're weak on that side.' It was like that was a wake-up call for me. It was like, 'Okay, you've got to do something about this, you've got to be serious, because if not, you won't be able to live

around to see your children grow up. You just won't be here.' That was my wakeup call then (Mitzi, 447-457).

A 38 year old participant had this experience:

When the doctor here in Michigan...cuz the first time I was sick I was in Texas...so when the doctor here in Michigan really explained what was going on with me, and I noticed some changes in myself when I got sick in Texas...whatever happened, they said it was a warning stroke. The doctor here said it was a[n] actual stroke. My vision changed, so I said, 'Okay, I need to take it serious and take better care of myself,' so I started taking the medicine. I was never really good at taking medicine, so I started taking it and trying to exercise and trying to eat right (Victoria, 34-42).

There are two messages conveyed by the women's stories. First, two participants referenced how they were not doing the things they should have been doing to care for their BP (e.g., taking medicine, eating, and exercise) before their wakeup call. Their statements represent a reflection on previous choices about behavior. Second, the four women needed a wakeup call for them to begin taking their BP seriously and decide that it was time to take care of themselves. Their "wakeup calls" typically came in the form of a hospitalization or a serious disease that scared them into action. This wakeup call was an important stimulus for these women to become serious about taking care of their BP and themselves to get back to normal.

Subtheme: Doing it right. The subtheme of "doing it right" emerged as many participants described how that they knew, tried, and/ or wanted to do the right things to get their BP to normal on a day-to-day basis. One participant best typified the subtheme of "doing it

right” when she stated “Doing it right is making sure that I’m exercising frequently, making sure that I am eating the appropriate food groups, and staying away from unhealthy things” (Mitzi, 26-28). Some participants had difficulty finding the time to do the right things to take care of their BP with competing demands in their lives. One participant characterized the impact of her competing demands on caring for herself:

I've come to realize that all through my life...I've wondered because I had the kids...I had eight kids. My youngest one she died right after she was born. I just had the seven that were still living. It seemed like a never-ending do this for this one, do this for that one. Then the grandkids came along. Doin' for the grandkids. Now the great-grandkids are here, same thing. It's like I never...I've neglected myself. I believe that if I had at least made the time maybe I wouldn't have this problem or whatever the case may be (Coco, 693-701).

Even in the presence of competing demands, many women described many activities that constituted “doing it right” relative to caring for their BP. The activities that the women did themselves to take care of their BP included: relieving stress, watching their diet, exercising, losing weight, stop smoking and drinking, and taking antihypertensive medication. Several African American participants included “home remedies” in their efforts to bring their BP back to normal. In many instances, women needed help from their friends and their doctors to “do it right” to take care of their BP. The women’s actions in “doing it right” in the succeeding paragraphs is organized according to (a) their self-performed actions, (taking care of me), (b) use of home remedies, and (c) help from important others. Each group of actions is discussed separately.

Taking care of me. Many women reported several activities that they knew about or performed to take care of their BP. Their activities included reducing stress, watching their diet, exercising, losing weight, stopping smoking and drinking, and taking medicine. Each of these activities are described separately.

Reducing stress. Many participants took various actions to reduce their stress. Stress was often viewed as a source of BP changes by participants. One participant was a full-time student and felt it was important to relax and avoid undue stress down to avoid changes in her BP pressure:

Well, if I have nothing else to do, [I] lay under the air conditioner. I also bought one of those little pools, so I do go there. I try to go in the evening or early in the day, before the sun's beaming. What else do we do? I play around on the computer sometimes. Basically, that's what I do if it's really hot. If it's not so hot, I might go outside. I might walk to the park, go to church, things like that. Church relaxes me. That's one of the things I like to do (Angel, 176-182).

Another participant knew she got excited easily:

I just sit down and relax. Just wherever I'm at, just try to relax and calm my own self down, because if I don't know that my pressure...like I said, if I'm out and about, like the sun or stuff like that, I try not to be out there, because I guess it just be so hot and the sun beaming down on you, so I try...I try to take really good care of myself and the blood pressure, like I said (Daneice, 377-382).

Some participants reported different strategies they used to keep themselves calm. One participant stated:

Yes, it's very important to me and to my blood pressure, because as long as I'm calm and not upset about nothing, I'm in a stable state. You know what I'm saying? That's why I drink tea like I do (Red, 408-410).

Another participant developed personal several strategies to relieve her work-related stress and avoid undesired BP changes. She did yoga and meditation and reported these benefits “Yeah, cuz not only because it helps me, my body, but I think it keeps me calm. I meditate now” (Victoria, 101-102). The same participant was a social worker charged with protecting children and families. She developed a way to avoid taking her stressful job home with her:

I just started to journal, and the way the counselor has me doing it is that I journal in my car, so when I go into my house whatever I wrote down in that journal has to stay in my car. It's the way it's supposed to work mentally, so I automatically go in the house and I will get busy with something so that my consumers don't come into the house with me (Victoria, 396-401).

Another participant quit one stressful job and was then unemployed at the time of her interview. She was facing the challenges of looking for a new job. She recalled this recent conversation with a friend:

A friend of mine calls me the other day, said, 'Would you go back to work for your old company if they asked you to come back?' I know that with my current situation of being unemployed, I left in good standing. I'd probably get a decent pay. Given a phone call to the right person in charge, I could probably go back in. I said to her, 'No. 'I said, 'I'm not going back to where I was health-wise and stress-wise' (Yvette, 440-446).

The activities that participants performed to avoid stress and calm themselves ranged from drinking tea to quitting high stress jobs. The participants shared a desire to be as healthy as possible and keeping their BP as normal as possible.

Watching my diet. Most participants described how they changed their diet in their efforts to “do it right” in taking care of their BP. One key area that many women discussed was the reduction and/or elimination of salt from their diet. The women often had difficulty reducing their dietary salt but noted it was an important step in keeping their BP down. One participant described her challenges reducing the salt in her diet:

I do buy the Mrs. Dash, the salt-free things that are supposed to help, but not everything is proven yet like that. I try to stay out of the salt except for sometimes potato chips. That’s my downfall, but besides that, I try to not put salt. If I’m cooking, you can guarantee there’s not salt in my food, because I don’t add it (Angel, 133-139).

One participant, found it challenging to limit her salt while on the go at work:

The type of work I do...I work in the field, so I can’t always just stop and eat fast food. I have to watch sodium and all this other stuff that I never paid attention to and just eat what I want (Victoria, 18-21).

Another participant reduced the salt to lessen side effects that she noticed with her antihypertensive medication “I try to cut down on salt but that’s more even just because one of the medications I takes, causes you to like...my feet to swell” (Beverly, 390-392). Some participants encountered resistance from their families when they prepared meals without salt.

One participant described:

Now, when it comes to cooking I don't use any salt. I've stopped using salt. The kids make fun of me because they'll be like, 'Grandma or Ma you need to add salt to this.' I say, 'You can add your own salt'. For me it's just the way it needs to be (Coco, 372-376).

A second participant found it easier to cook for herself rather than for large groups of people:

For me, I do better when I don't have to cook for other people, particularly a large group of people, because it's hard to tell a large group of people, 'I'm going to cook this meal but I'm not going to cook it with a lot of salt' (Yvette, 60-63).

Two participants liked salt and tried to use "a little" or "not a lot of salt" to keep their BP down (Daneice, 121-123; Emma, 32-35). Reducing and avoiding salt was a common action reported by most participants that they did to manage their BP. These actions were often not easy for many women as they had to abstain from their favorite foods and face negative feedback from family and friends.

Some participants recognized when they were eating the "wrong" foods or had unhealthy eating habits that had a negative effect on their BP. One participant commented on her eating habits "I know that I don't eat properly. I'm a salt eater and I'm a fried food eater, and sweets. Oh my gosh, I love sweets. I know when I start eating wrong" (Aimee, 188-190). A second participant described how her eating habits impacted her BP:

Okay, what I mean by managing my blood pressure, I mean making sure that I'm eating properly, okay, because at one time, I was not eating...I would wait till the end of the day to eat, and then all of a sudden, I'd have this intense headache coming on. That's not healthy, so I started making sure that at least in the

morning time that I'm eating a little something, even if it's not a lot, and eating some breakfast, and eating just a couple of foods throughout the day or little snacks throughout the day. That helped improve that some (Mitzi, 268-276).

Another participant described how her food choice affected her BP:

I eat a lot of fried foods, which I shouldn't. I think that's why it go up sometimes. Yeah, one time it really went up. I was doing good. My foot swelled up, too. I had some Popeye's chicken two days in a row. That made it run up sky high (Red, 319-322).

These women recognized that their food choices and eating habits had a negative impact on their BP and both their physical and mental health.

Exercising. While many participants recognized exercise as an important component to keeping BP down, only a few actually engaged in regular routines. One participant walked daily and described this effect "So I walked, and I walked every day, and I walked two and three times a day. That literally got my blood pressure down to a normal range" (Aimee, 364-367). A second participant had a similar experience:

I park far and I walk. I constantly want to do exercises. This morning before I came here, I walked two blocks. I constantly want to walk while I try to get the weight off so I don't have to take so much medication...to lower my milligrams. I'm constantly thinking about exercising. I probably walk hard three times a day (Emma, 638-642).

Another participant described "I walk. I do water aerobics. I do some chair exercise. I actually recently have been doing some workout with seniors, so chair exercises and walking. I don't

know how to swim, but I do water aerobics” (Mary, 571-574). One participant had to start walking out of necessity and lost 60 pounds;

One thing, my car broke down in March of this year. I had a Dodge Caravan. I’m the only one supportin’ the family, so I had to walk. It was 3.5 miles one way. I did that between March of this year ‘til about July (Sarah, 50-53).

One participant engaged in several activities that she found to be physically and mentally beneficial:

I do a lot of yoga. Yeah, cuz not only because it helps me, my body, but I think it keeps me calm. I meditate now. I’m doing things to try to figure out like why my pressure...cuz sometime it still spikes right now, even when I’m taking the medicine, and I’ll be like, okay, what did I do? Did I eat popcorn or did I let somebody make me mad, or whatever, so I try to meditate and exercise, and I swim (Victoria, 99, 101-106).

Other participants wanted or intended to exercise. For example, one participant admitted that she did not exercise “Well, I need to exercise. I think exercise have a lot to do with it [BP] too, so I figure if I exercise, take my medicine right, I’ll be all right” (Daneice, 503-505). She described her plan “I’m gonna work on it. I try to walk up the steps, a couple of flight of stairs instead of taking the elevator. I try to do little things at a time. That’s what I try to do” (Daneice, 520-522). A second participant had similar intentions “Putting back in the exercise and eating correctly. That’s all I need to do to get the weight down, if it’s nothing but 40 pounds, and my blood pressure goes to normal” (Johnny, 277-279). Another participant intended to exercise after she quit smoking and cut out the salt “I really need to start exercising. I heard that helps, too. You

need to exercise” (Mary, 449-450). Exercise was commonly recognized by participants as necessary to keeping their BP normal. Some participants described their regular exercise routines and were motivated to decrease their weight, the amount of needed antihypertensive medication, and their BP. Other participants recognized their importance of exercise and intended to become more physically active.

Losing weight. Losing weight was seen by many participants as an important means to lower their BP and either take less or avoid antihypertensive medication. One participant believed her BP would be lower and her health would improve if she lost weight and stated:

If I gain more weight, then that means that my blood pressure is gonna go up higher, too. I’m trying to work with all of that, and I think I’m doing pretty well because I’m losing weight and also monitoring my stress level of things that are taking place in my life (Mitzi, 259-263).

A second participant also described why she wanted to lose weight:

Well, I definitely wanna lose weight. My problem is that for the last ten years I’ve been stuck at the same weight. I might lose a little bit, but then it [weight] goes right back up to that one little spot. It [weight] don’t go above it, but it’ll stay right there. I would like to be able to lose weight and try to get my health back on track (Coco, 705-709).

Another participant gained weight after stopping smoking and needed antihypertensive medication:

See if I lose the weight, I could probably get off of all this (medicine). I think weight gain has a lot to do with it [BP]. That’s what I hear, that weight gain...if

you get down to like...if I was to get down to 140, I would probably be able to get off all this stuff and keep stress out of my life (Mary, 638-642).

Another participant was advised by her doctor that she needed to lose weight

“No. They like, ‘Well, you need to lose weight. If you lose weight, that’ll help too.’ I’m like, ‘Okay. Okay.’ I’m like, “I’m gonna work on it [lose weight].” I keep saying...which I’m still saying I’m gonna work on it” (Daneice, 513-516).

Other participants described how weight loss helped them avoid and/or stop their antihypertensive medication. One participant lost 60 pounds and was able to stop her BP medication:

It felt like my vision improved after I got off, my hearing improved, my allergies improved, and I was off for nine months. I ate the bad food again. Went back to my old ways. Started gaining the weight back and now I'm back on it [medication] again (Johnny, 232-235).

Another participant had a similar experience when she had a large weight loss and needed less medicine “I feel great right now. I went from 221 to 160. Medication two months ago, cut in half“ (Sarah, 29-30, 34). A third participant also was able to stop her medication after a major weight loss:

I didn't want to take pills until I started getting in my 20s and 30s. Once I started getting in my 20s and 30s, at some point, actually between 16 and about 25, I ended up losing...I lost a large amount of weight, and I didn't take the medicine either because I lost like way over about 100 pounds or so. Then my blood pressure just stabilized on its own because I had lost the weight, and I didn't have

the headaches anymore. Then I picked the weight back up again, then my blood pressure started rising back up again (Mitzi, 435-442).

Many participants both wanted and needed to lose weight for their BP and overall health. Some women noticed an improvement in their BP and were able to take less or stop antihypertensive medication when they lost weight.

Stopping smoking and drinking. Some participants had different experiences and expectations about stopping smoking and drinking. Two women avoided tobacco and alcohol expecting to have lower BP. They stopped smoking and drinking alcohol and still needed antihypertensive medication. One participant described:

I used to drink. I don't drink anymore because that was terrible for me and my blood pressure and the blood pressure and the drinking was not a good thing. So I stopped drinking. I stopped smoking. I thought once I did those two things that my blood pressure would go away, but that didn't happen. I still to this day take a blood pressure [pill] (Johnny, 210-215).

A second participant smoking for health reasons and reported these results:

Well, I used to be a smoker. I quit smoking two years ago, almost two years ago, 20 months exact. Then, I put 50 pounds on, and then, since I put the 50 pounds on, bam. I'm on a blood pressure pill (Mary, 325-326, 329-330).

Another participant kept smoking for these reasons:

To me, being calm is like I can go in my living room, I have a reclining chair. I get me a cup of tea, bring my cigarettes and my lighter over there, sit down, get

the remote and click on the TV and put my feet up and cool. I be quite calm. That sounds calming, don't it? (Red, 422-426).

This participant kept smoking for her enjoyment and as a means to stay calm. The other women were did not succeed in improving their BP after quitting smoking and/or drinking.

Trying home remedies. Some participants used “home “remedies” to keep their BP down. Vinegar and garlic were among common home remedies that the women heard from friends and family members. One participant described her experience taking garlic:

One time my pressure...I was at work, and my pressure was high, and they was like, ‘Well, if you take garlic, garlic bring your pressure down.’ I’m like, “For real?” They was like, ‘Yeah. Just take a little bit of garlic.’ Did it [garlic] bring it [BP] down? I don’t know (Daneice, 384-387).

A second participant tried this strategy when her BP was mildly elevated “Vinegar in water first if it's [BP] not real bad” (Johnny, 469). A third participant also used vinegar and reported “I’ll take a teaspoon of apple cider vinegar that my aunt from down south told me will lower your pressure. Vinegar helps keep your pressure down and I’d eat a lot of stuff with garlic” (Victoria, 154-156). Another participant did not practice any home remedies herself but described what her family did “my mom told me that her sister would eat a lot of oranges because of her blood pressure” (Mary, 420-421). The same participant described “I also heard if you drink vinegar that that’s supposed to lower blood pressure, apple cider vinegar. That’s supposed to bring your blood pressure down if you drink a teaspoon of that. Take a teaspoon every day” (Mary, 433-436). One participant tried different home remedies to lower her BP “I take flaxseed, ground flaxseed. I don’t know where the bitter melon comes from, but somebody told me if you turn it

into tea” (Emma, 523-525). Some women desired to get their BP to normal and would try whatever is available, including home remedies, to them to achieve this goal.

Taking my medicine. Participants had divergent thoughts and feelings about taking their antihypertensive medication. Some participants needed their medication to keep their BP normal and feel well. One participant’s main priority for her BP was “Number one is taking all my medicines right” (Daneice, 414). Another participant remembered a time when she was without medicine “I hadn’t had it for the whole week and I quite literally felt like if...I was either gonna have to go to the hospital or I would probably die” (Beverly, 88-90). She felt better with her medication:

If I take the medicine every day, I feel like I’m normal. I have normal blood pressure. I don’t have the side effects of what were bad for me...the really bad headaches and then the heart...that’s troubling too (Beverly, 380-383).

A third participant had a similar experience “When you’re on your medication, you’re good. You feel no different” (Mary, 49-50). A different participant described how she decided that she needed her medicine:

I did need the medication. I tried games because I didn't want to take the pill because upon my reading I found out it would mess with my heart, my kidneys, my lungs, and later on be on dialysis and all this stuff. I didn't wanna take it so I tried doing all the precautions of being careful what I eat. Then I would have my binges and every time I would go right back up. When I seen how the first pill made a difference in my life, I felt calm, I felt relaxed. Just taking the first pill I felt the pressure when it went down. I felt happy. I wasn't tensed up. And I was

able to accomplish a whole lot. And my vision did get clear too (Johnny, 677-688).

The four women needed their medicine to feel “normal” and be free of distressful body changes.

Other participants did not want to take and had concerns about medications. One participant expressed her desire about medicine “Yep, I want all of it off. I don’t wanna be on it” (Sarah, 704). A second participant had a similar wish “To stop taking the pills, get off the pills, the blood pressure pills and be able to manage it without medication” (Yvette, 839-840). Another participant described a different concern “I’m not really big on medication because I believe that one thing will cause something else and you’ll prescribe me something for that, but I do take my medicine now” (Victoria, 156-159). A participant recalled a conversation she had with her uncle, who had high BP, about getting off of medication:

When I told him I was showing signs on it [BP], he told me, ‘If you can control it [BP] without going on pills do that, because once you get on the pills it’s hard to come off. You don’t want it [pills].’ Then my first pill that I got was like 10 milligrams. He’s like, ‘Oh yeah, I looked at that one. That’s not a pill that they can’t wean you off.’ I can’t remember what it was. He said, ‘That’s a medicine that they can wean you off.’ Now recently, when I told him which medicine I was taking he said, ‘You’re probably going to be on it for the rest of your life, unless something drastically changes because having the 10 milligram in the morning and 120 in the evening and the fact that when you take away the 120 your blood pressure goes up, it’s saying that your body can’t actually control it anymore.’ I

look at my medicine and I see my grandma, I see my mom taking all these pills. I don't like that (Yvette, 820-835).

This participant was not happy about being committed to taking medication for the rest of her life like other family members. A couple participants intentionally stopped or reduced taking their antihypertensive medications for different reasons. One participant had this experience:

I've played sort of doctor on myself by not taking medicine. I've taken it...I mean I started off with four medicines. The doctor said I could do two. I went in between not taking any at all, just trying to see if I can monitor my own blood pressure, and see what's working, trying to play doctor, eating certain foods to see well, is this working? Maybe it is because I'm down to one medicine that I'm taking. I should be taking two, but I haven't told my doctor I'm not taking the other one yet (Mitzi, 732-740).

This participant found that "playing doctor" on herself and trying different things worked to keep her BP down or normal (Mitzi, 745). Another participant had different motivations when she stopped taking her medications. Her BP would be stable for a brief period then she would get sick:

I stopped taking all my medicines almost for like seven months; no asthma, no blood pressure pills, no nothing. I didn't take anything. I just took it on myself that I was well, so I was still...my pressure was still low, which...I take a pill like...say my pressure will go up, right? I take the pills for a week and then I stop. I'm like, okay, they're under control, till I start having attacks and start going in the hospital (Daneice, 424-430).

Both participants stopped their antihypertensive medications intentionally for different reasons. One woman “played doctor” and reduced her medications herself while modifying her diet. Another participant stopped taking her medications during periods when her BP was stable.

In summary, all the participants took medications but had diverse thoughts and feelings about taking them. Some participants took their medication with the expectation that they would feel well when their BP was normal. Other participants did not like or want to take medicine. Some women were concerned about taking medicine long term with possible side effects and negative experiences from watching family members with high BP.

In summary, all the women described various actions that they performed themselves to “take care of me” and return their BP levels to normal. Their actions consisted of reducing their stress, watching their diet, exercising, losing weight, stopping smoking and drinking, trying home remedies, and taking medicine. For many women in the study, these actions were important steps in “doing it right” to care for their BP and themselves.

Getting help. Many participants needed assistance to help “do it right” to take care of their BP. The two types of assistance described by participants came from (a) their doctors, and (b) friends. Each type of help is described separately.

Seeing the doctor. Many participants had varied experiences with their doctors beyond getting their medication. Many participants stated their doctors were usually in a hurry and did not have time to talk to them about their BP and health. One participant had this frustration:

Usually, unless you’re getting a physical, you only have about ten minutes with the doctor, if that. They come in for a minute and they’re in a hurry, so sometimes you can’t go through everything with them, because they’re gotta go people.

They're, like, 'Okay, I gotta get to this. I've gotta do this. I'm in a hurry. I'm running behind,' so it's kinda hard to explain to them (Angel, 372-377).

Another participant had a similar experience with a recent doctor who only adjusted her medication:

Well, when I would try to tell him he was always, like I said, in a hurry because his office was always full. It was just him, so I think that's why a lotta times...I mean, cuz I've never...in previous doctors that I've had I've never had them not wanna draw blood for whatever reason or try to get me to...certain tests. I can honestly say I haven't had a complete physical in God knows how long (Coco, 651-656).

A participant changed doctors when she was dissatisfied with her prior physician. She described her improved satisfaction with her current doctor:

Because after she gave me the medication, after that my blood pressure was normal every time. She said, 'If you keep up with this, you know, you may be able to go back down to ten.' I felt more relaxed with her because she wasn't trying to throw off all this other medication, all kinds of medication on me. I was a little bit more comfortable with her instead of the male. That coulda made a difference as well, I think because she was a listener. She listened to you (Johnny, 890-897).

Another participant was satisfied with her doctor because her BP was improved:

My doctor is extremely popular and, I guess, extremely busy. He has worked on me, cuz the medicine that I'm currently taking is my third medicine. The first one

I was taking was called Lisinopril, and it caused me to cough a lot, so he took me off of Lisinopril, and then I was on Norvasc and it was not working, so now I'm taking Azor, which seems to work better (Victoria, 260-266).

While the same participant was satisfied because her BP was improved, she did not like that "he won't talk to me in language that I understand" (Victoria, 275-276). Another participant could and was satisfied with her doctor:

Generally, my doctor is pretty open. He will ask me, 'Well, how has things been going?' I'll say, 'Well, everything is going well.' He'll say, 'Well, I can tell because your blood pressure seems like its sort of stabilizing.' He'll go back in history and he'll say, 'Well, this is what your blood pressure was. Your last visit was such and such, and then today it's this,' or either two months ago it was such and such (Mitzi, 528-534).

Doctors were recognized by most participants as important partners in helping them keep their BP normal. The participants wanted their doctor to spend time, listen, and talk with them in understandable language.

Some participants got important positive and negative reinforcement about their behaviors from their doctors based on their BP. One participant became concerned after this conversation with her doctor "The doctor told me, 'You keep this going this way, and the blood pressure and the heart shuts down, other organs, and you have to stop cuz you will give yourself a stroke and or a heart attack'" (Aimee, 273-277). Another participant reported what she heard from one her prior doctor:

Only thing they'll say is, 'You need to lose the weight'. That's all you mostly get from your doctors, lose the weight. And they always say, 'Oh your blood pressure's high.' Even when I know my blood pressure's not high because I go by my dot [in her eye]. He'll say, 'Your blood pressure's up a little bit. What're you doing?' (Johnny, 848-852).

A second participant's doctor equated her progress with her BP at the time of her visit:

He'll ask me, 'Well, what have you been doing because you're doing good.' If it's a little bit high, 'Well, you haven't been doing something, so what have you not been doing to make your blood pressure go up the way that it is.' He said, 'Well, can you figure out? He might say to me, 'Well, is it stress?'' (Mitzi; 536-540)

Another participant had this encounter with her doctor after leaving her stressful corporate job:

I wasn't feeling well and I went to the doctor. The nurse showed me into the room where the doctor would come see me. I passed my doctor's office. She was not ready to see me, but she came out of the office and she came into the room and she said, 'What are you doing?' At that point I had lost weight. My blood pressure reading was down and I had cancelled two appointments with neurology because I didn't need it. I was supposed to go [every] three [months]...because the headaches had started in October of the previous year. I was seeing the neurologist every year but because my headaches came back and I was hospitalized, I had to start over with my 30-day visits. She said, 'Whatever you're doing, keep doing it.' I told her I quit my job and she told me...she was very

happy that I quit my job and she hoped that I got another one because that job was the source of my stress, but she couldn't tell me that (Yvette, 267-285).

Doctors appeared to have two types of conversations with participants based on their BP at the time of office visits. Participants got positive reinforcement and praise for their behaviors and progress if their BP was down at the time of the encounter. If participants' BP was high, the conversations were more negative and focused on major adverse consequences and omissions or deviations from prescribed treatments.

Some participants stopped seeing their physicians when they lost their health insurance. One participant lost her insurance after her business failed and could not see her long time doctor. She reported the following experience after being hospitalized:

When I was in the hospital...when I was just in the hospital in April because I was having chest pains and confusion, and they treated for the heart. I had three EKG's and nitro under my tongue and all of those...are very, very frightening. At that time I was given Metoprolol, Lisinopril, and Pravastatin for my high blood pressure and my hypertension, or blood pressure, or heart. So they gave me the three and come home, and they give me a month's prescription note. I got that filled for one month.

Really, I've only been taking the metoprolol and the Pravastatin for one month. I get the lisinopril because my...I have a relative who's on the same prescription, same dosage, and they moved her to another one so I got her three months. Actually, I'm living off that last month. I don't know what...unless I can get insurance which I've asked for at work, I haven't gotten an answer. I need

insurance so I can go back to my doctor to get the prescription. The doctor visit's \$135. I don't have \$135 to do that (Aimee, 77-93).

This participant could afford generic medicine but not the fees for the office visits. Another participant had a different experience with her doctor after she lost her insurance after a divorce:

Then I went through a divorce and I lost all my insurance and so I continued to have medication for a while. Then the doctor that I was going to refused to give me any more medication because I couldn't afford to have...like she wanted me to have other testing done...kidneys and all these...so she refused to give me any more medication so I was without medication (Beverly, 41-46).

A third participant was unemployed and recalled this conversation with her doctor:

Now, as of the 22nd of this month, I don't have medical insurance, because my COBRA ran out. I have my medicines for 90 days, most of them, and I'm like, 'What happens now?' I'm missing a member of my team if I can't go see the doctor. I explained to her that my medical insurance was running out and I'm trying to figure out how to get continuations on my medical insurance where I'm not paying \$1,000 a month. She said if I needed to call, I could call her and the nurse. If I had to come in and defer the payment and see her, come in (Yvette, 745-753).

The lack of medical insurance for these participants was a major problem as they lost access to their physicians. Many women were not able to get needed evaluations and their medicine. The participants in turn had to resort to costly acute or emergency care when they were not feeling well.

In summary, physicians were important partners to participants in helping keep their BP near normal. Participants were looking for more than just getting their prescriptions from their doctors. They wanted to have their doctor's ear to talk about their BP and health in understandable terms. The communication from physicians at the encounters was important as participants took away positive or negative messages about their BP and personal behaviors. Some participants were exposed to a vicious cycle as they could not get to the treatment they needed to keep their BP down without health insurance.

Help from friends. Some participants used friends to help them "do it right" to keep their BP normal. One participant calls a friend she refers to as her "blood pressure sponsor" when she is angry or upset. She states that her friend tells her "Stop it. You know you have blood pressure. Stop it. Stop getting upset over it. It's not going to continue and you're going to end up with a stroke somewhere down the line" (Emma, 454-456). Another participant had a friend who helped her make better food choices while eating and shopping:

She's a lifetime member of Weight Watchers. She's constantly trying to talk me outta eating the bad foods. She said, 'If you can't eat it in moderation, don't buy it'. She's shopping with me now and that's been helping me a lot (Johnny, 819-821,825).

A third participant and her close friend supported one another:

Well, we talk almost every day or text. Even if it's something as simple as how are you and how's it going? We usually can indicate...we can gather in one another's voice what is our day like, stressful, not so stressful. It's just something

that we've actually learned over the years. We'll say, 'You better slow down before you get grounded' (Yvette, 686-691).

These participants acknowledged that close friends were instrumental in providing support while they work to keep their BP down

In summary, participants described their experiences of “doing it right” with several lifestyle behaviors and other strategies to get and keep their BP normal on a daily basis. The extent to which participants engaged in these behaviors varied from desire and intention to actual performance. Most of the participants needed help from their doctors to get their BP to near normal. Other participants got instrumental support from their friends to help them “do the right things”.

In conclusion, women living with hypertension *can tell* when their blood pressure is not normal; they *tend to it* but sometimes it takes *a wakeup call* to get them to *do the right things* all in an effort to *get to normal*. The central theme of “getting to normal” reflected the participants’ desires of needing as normal a BP as possible to live their lives and avoid negative health consequences. The four subthemes characterized a process of awareness, tending to episodic changes, making key decisions, and ongoing management participants used to get themselves to get to normal.

van Manen’s Lifeworld Existential Reflection

The textual data was further analyzed using van Manen’s (1990) four existential themes as guides to augment the central themes and subthemes of the self-management of perceived BP changes. van Manen (1990/2011c) proposed that the four existentials are common to all lifeworlds regardless of the specific essential themes that characterize the phenomenon or the

historical, personal, and sociocultural contexts of the individual(s) under study. The four existential themes include lived space (spatiality), lived body (corporeality), lived time (temporality), and lived others (relationality) (van Manen, 1990). The intent behind using the existentials to analyze the textual descriptions was to discover more depth in the participants' experiences in addition to and beyond the essential central and subthemes of the study. Each of van Manen's (1990) four existentials is individually described in relation to the textual data.

Lived space. van Manen (2011d) referred to lived space or spatiality as "the existential theme that refers us to the world or landscape in which human beings move and find themselves at home". Some participants retreated to a safe place when their BP was elevated and they did not feel well. The act of retreating when not feeling well was a means for them to seek relief from bothersome BP changes. One participant referenced retreating when her BP was up "Lower the blood pressure and get rid of the headache. I feel like I kinda put myself in a cocoon-type thing" (Coco, 299). Another participant worked as a computer administrator and described how she dealt with her headaches at work "In one instance, well, actually a couple instances, I found myself having to close my office door and have my office totally dark to get the headache under control" (Yvette, 220-222). A third participant described how she retreated when she felt her headaches:

Well, I would always try to take medication of some...ya know and I would try to take Excedrin and it usually would not work. I mean most the time I just had to try to plug on but if it was so bad the only thing that would work for me is to go just in a dark room that would have no light whatsoever.... Then basically I felt like it was just pretty much I had to wait it out (Beverly, 332-339).

These women depicted a common experience of retreating to a safe place both at home and at work when they did not feel well to get their pressure down and relieve their headaches.

Lived body. van Manen (2011e) referred to lived body or corporality as “bodily being in the world and meeting others through their physical body”. van Manen (2011e) also asserted that people will both conceal and reveal “something about ourselves”. The study participants typified this theme in two respects. First, all the participants experienced distressful body changes that they could feel but were not revealed to others. Other study participants revealed their BP changes to family members and coworkers during stressful or emotional situations. One participant described this experience:

I don't know so much if it's other people or the expectations I put on myself, and then something doesn't meet that expectation for me, and then I start getting very angry. If my husband doesn't do something I ask the way I ask it to be done, I am very upset. In fact, he'll say, 'You're going to explode,' cuz my face will get red and I start talking very fast at him and very loudly. I know my blood pressure. I'll tell him, 'You're the one that's doing this' (Aimee, 170-175).

A second participant recounted a similar experience at home when her husband thought her BP might be elevated:

If I would get on a phone and say I have an argument with one of my kids or something, or something doesn't go right, my blood pressure would shoot right up cuz I have a thing when I take it [BP] at home. I'll get all red in the face, and my husband will say, 'Calm down. Calm down.' You know you can tell when it's [BP] shooting up (Mary, 147-152).

Another participant recalled an experience at her doctor's office when she had an abnormally high BP and was not allowed to go home right away:

I don't know why it was high that day. They was like, 'Well, we gonna have to bring your pressure down before you go home.' I'm like, 'What?' He was like, 'I can't let you go home'. At first he was like, 'You got a headache?' He was like...cuz my eyes were red. He was like, 'You getting a headache?' (Daneice, 257-261).

These women revealed their elevated BP to their families, coworkers, and doctors through visible body changes.

Lived time. van Manen (2011f) stated that the theme of lived time or temporality is subjective time as opposed to objective or clock time. Some women in the study experienced delays in time by having to wait for their BP to go down and get symptom relief. Some participants were distressed and in pain while they waited for whatever action they took to have a beneficial effect. This participant reported how she handled "time" when going to the doctor:

Now they have me get up a couple of hours early, take my medication, then come to the doctor's so it could be elevate...it could be under control...because if my blood pressure's high a certain way, then they're not gonna let me go home, period. They don't let me go home until they can elevate my pressure back down, because when I went to the doctor a week ago, it was high and they didn't let me go home until they brought it down, because they said they don't wanna be responsible because it was too high for me to be out, and I could've passed out or anything (Daneice, 52-60).

A second participant reported an experience where she went to her doctor where she was found to have an elevated BP and had to wait for it to improve:

I had experienced my blood pressure getting high, as high as 200 over...I want to say it was like about 190 or so. That was a real, real scary feeling because when I got to the doctor, he didn't want to let me go, and I don't like going in hospitals. He was telling me, 'Well, if we don't get your blood pressure down, first of all, I'm gonna give you some Catapres,' so he gave me the Catapres. Then he said he wanted to give me Dyazide. He gave me Dyazide. Then he ended up, before I left from out of there, I had taken probably like about four or five medicines because even within two hours, my blood pressure still did not go down enough (Mitzi, 324-335)

Subjective time appeared to slow for these women as they had to wait for their BP to improve after some intervention. The participants may have been annoyed and/or distressed during these waiting periods.

Lived others. van Manen (2011g) stated that the theme of lived others or relationality is “the lived relation we maintain with others in the interpersonal space that we share with them”. Participants reported two types of experiences in their relations with others when they thought their BP was higher from normal. First, many participants withdrew from others when their BP might be elevated. The women in the preceding paragraph under lived space who retreated to safe place were also distancing themselves from others when they did not feel well. Some participants withdrew when facing emotionally charged situations. One participant described this experience at work when she felt her BP changing “Usually [I] end up crying. I just start crying

and then get myself out of that situation or out of that area and walk away, and just try to gather myself” (Aimee, 300-302). A second participant reported how she had to stay away from others to avoid situations if she thought her BP might be affected in a potentially negative way “Because a lotta times I hafta walk away from certain situations because I know if I don't my blood pressure's gonna go up. I'm gonna get a headache” (Coco, 25-29).

These participants described experiences where they directly or indirectly avoided others when their BP was higher than normal. Second, many participants relied on their relationships with key individuals who provided help and support to get back to normal. Their beneficial relationships were often with their friends and their doctors. Although the women relied heavily on their doctors, they did not always view those relationships as positive and satisfying. These participant experiences with their families, friends, and doctors are described in the subtheme “doing it right” under the section of “getting help”.

In summary, having BP that was higher than normal negatively impacted many participants relative to van Manen’s (1990) four existential themes of lived space, body, time, and others. The women described needing to retreat to a safe space, waiting for their BP to return to normal and withdrawing themselves from others. Additionally, all the participants concealed and some revealed their BP changes to their friends, family, and providers. Many women approached their doctors and friends for help to get their BP to normal.

In conclusion, this chapter described the results of the inquiry that was discovered through two thematic analytic steps. The first step was an iterative process to discover the essential central and subthemes from the textual data that depicted the participants’ experiences self-managing their perceived BP changes. The central theme of the study was “getting to

normal". Having a near normal BP was important to the participants as they could be, feel, and act normally in their life worlds. The four subthemes of (a) "I can tell", (b) "tending to it", (c) "the wakeup call", and (d) "doing it right" characterized actions undertaken by participants to get their BP back to normal on an episodic and an ongoing basis.

The second step of thematic analysis was using van Manen's (1990) four life world existentials themes to reflect on the textual data and capture additional depth and meaning to the participants' experiences. Participants characterized their BP when it was away from normal as generally disruptive to themselves and their lives in four respects. Participants had to retreat to a safe space, conceal and/or reveal their BP changes to others, wait to feel better, and avoid and approach others when their BP was elevated.

CHAPTER 6-REFLECTION ON THE FINDINGS

The purpose of this study was to describe the experiences of self-managing perceived BP changes in women with HTN. Thirteen women described how they could tell their BP was higher than normal by their body changes and triggers. The BP changes were often distressful to the women. The women used several self-management strategies in order to get their bodies and their BP back to normal which permitted their lives to get back to normal. van Manen's (1990) hermeneutic phenomenology methodology and method were used to conduct this study. The meaning of having bothersome BP changes was that it was disruptive to the participants as they lived their daily lives. The purpose of this chapter is to present a summary of the key findings, and reflect on the essential themes and life world existentials relative to extant research studies and theoretical frameworks. The reflection on the identified themes and existential reflection is presented followed by a discussion of significance of the study to the discipline of nursing and implications for research, clinical practice, and public health. This chapter concludes with a discussion of the limitations and strengths of this study.

Summary of Key Findings

In summary, women living with hypertension can tell when their blood pressure is not normal; they tend to it but sometimes it takes a wakeup call to get them to do the right things all in an effort to get to normal. The PI discovered one central theme and four subthemes that formed the essential themes of the current study. The central theme was "getting to normal". The four subthemes are (a) "I can tell", (b) "tending to it", (c) "the wakeup call", and (d) "doing it right". The participants wanted and needed to get their BP to be as normal as possible to permit

them to live as normally as possible. The subthemes illustrate a sequence of actions used by participants to keep their BP down. The sequence of actions included perceptual awareness, innate knowing, confirmatory actions, episodic treatment of changes, and day-to-day BP management behaviors.

The life world of individuals can be characterized through four existential themes that are common across all phenomena and individuals (van Manen, 1990). The four existential themes are lived space (spatiality), lived body (corporality), lived time (temporality), and lived others (relationality) (van Manen, 1990). Participants would immediately retreat to a safe physical space or a solitary place when their BP was higher than normal. Participants would experience distressful but concealed body changes such as headaches, and reveal their BP changes to others when turning red. The women in the current study lost subjective time having to wait for their BP to return to normal. Finally, participants would often withdraw from others and walk away when they felt their BP change or they could rely on their doctors and friends for help. In summary, the key findings of the current study are represented by five essential themes (one central and four subthemes) and van Manen's (1990) life world existentials of lived space, lived body, lived time, and lived others. Participants depicted a process of awareness, confirmation, episodic symptom-driven actions, and day-to-day BP management to return their BP changes to near normal levels.

The central purpose of this chapter is to reflect on the study findings and present the contribution of the study to the discipline of nursing implications for research, clinical practice, and public health. This purpose is achieved through a description of the essential central and subthemes and the lifeworld existentials in context with extant literature and existing nursing,

anthropology, and psychological theories. The current study is an exploratory research study to examine perceived BP changes in women. The PI was not able to find directly comparable research studies with populations that directly match the current study and its participants. The PI of the current study found that qualitative studies of women with migraine headaches, a similar symptom to the current study participants, was a similar group for empiric comparison and contrast in many instances. The similarities and differences between the current study participants and the research of women with migraines are explored in the succeeding paragraphs. This chapter first presents reflection of the essential themes relative to extant literature and theory. Reflection of the lifeworld existentials relative to the extant literature is followed by the implications for research and practice.

Reflection on the Essential Themes Relative to Extant Literature

The central theme: “Getting to normal”. For many participants in this study, getting their BP to normal meant more than the objective BP measurement. The women in the current study needed their pressure to be normal to reduce or prevent distressful body changes. In turn, if their BP was normal, the participants felt normal in their daily lives. This belief is reflected by a participant’s statement ”As long as my blood pressure's doing fine, it's not high or anything, it's a normal level, it's like living any other pattern, like I was before I had high blood pressure” (Red, 18-21). The women experienced various burdens and fears attributable to elevated BP that impacted them negatively in many ways.

Participants in the current study experienced three personal burdens when their BP was elevated. First, when they had body changes, the women often did not feel well enough to live their usual lives and meet their responsibilities as students, wives, mothers, and grandmothers.

One participant typified this premise when she said it was a miracle when she was free from her headaches that she could care for her five children. Second, many participants were concerned about serious negative consequences caused by their BP to their body and health. Their concerns ranged from “wearing out my BP system” to having a catastrophic stroke that would kill them or cause disability. Third, the women were troubled by fears of dying prematurely from their elevated BP. Many women wanted to live as long a life as possible to be with their families. The participants wanted to be and feel healthy and not worry about their BP. For the women in the study, getting their BP down to normal levels was connected with feeling and living normally and avoiding negative health consequences from their elevated BP.

The participants’ need to have normal BP in order to live normally in their daily lives is consistent with the results of extant qualitative research studies of women with distressful chronic conditions (i.e., migraines, celiac disease, and chronic pain) in two ways (Jacobsson, Hallert, Milberg, & Friedrichsen, 2012; Ramsey, 2012; Rutberg & Ohrling, 2012). First, similar to current study participants, many participants in previous qualitative studies experienced distressful symptoms during an exacerbation of their respective conditions (Jacobsson, et al., 2012; Ramsey, 2012; Rutberg & Ohrling, 2012). For example, ten women with migraine headaches studied by Rutberg and Ohrling (2012) described being “besieged” and “incapacitated” by their symptoms (p.332). The participants in the qualitative studies described struggling to live normally and meet their responsibilities when symptomatic (Jacobsson et al., 2012; Ramsey, 2012; Rutberg & Ohrling, 2012). The participants in the current study also had difficulties living their lives normally when their BP was higher than normal. The common

factor between the participants in the qualitative studies and the women in the current study is not being able to live normally during exacerbations of their conditions.

Contrary to the women in qualitative studies of migraines, and chronic pain, the participants in the current study expressed fears of catastrophic health problems and dying from high BP. These women are fearful of having strokes, myocardial infarctions, becoming disabled, and/or dying prematurely from their high BP. The fears of the women about catastrophic health consequences of high BP in the current study are similar to findings of African American men and women with HTN in existing qualitative studies (Boutin-Foster, Ogedegbe, Ravenell, Robbins, & Charlson, 2007; Lukoschek, 2003). The participants in those qualitative studies were aware that catastrophic cardiovascular diseases and death were serious health consequences of uncontrolled HTN (Boutin-Foster et al., 2007; Lukoschek, 2003). The women in the current study both knew and feared the serious consequences of high BP. The European American women in the current study were just as knowledgeable and fearful of strokes, myocardial infarctions, and death as the African American women. The fears of death, disability, and catastrophic illness from high BP may not have been described in European American women to the same extent as African Americans in existing research. The current study adds a perspective of European American women to the existing knowledge of HTN.

In summary, the central theme of the current study is “getting to normal”. Having normal BP for the women meant that they were free of distressful symptoms and able to live their normal lives. The women’s perspective about needing normal BP to feel and live normally is similar to findings in studies of women with celiac disease, chronic pain, and migraine headaches (Jacobsson et al., 2012; Ramsey, 2012; Rutberg & Ohrling, 2012). The participants in the current

study were similar to participants in extant studies of persons with HTN in terms of their knowledge and fears of catastrophic diseases, disability and death from HTN. The current study participants differed from women in studies with other chronic illnesses in that death and catastrophic conditions were not concerns referenced by the study participants who suffered from migraines and chronic pain.

Subtheme: “I can tell”. All the women in the current study could tell that their BP departed from normal when they experienced bothersome changes and/or exposure to triggers (e.g., stress, emotional situations, eating salty and fatty food). The participants relied on knowledge of their bodies to help them “tell” that their BP changed. Many women also were sure that they could tell when their BP was high. The women in the current study are compared and contrasted to extant research of persons suffering from migraines and cardiovascular diseases. The discussion is organized according to (a) “I know my body”, (b) body changes, and (c) “I know my triggers”.

I know my body. Participants’ knowledge about their body changes when their BP was higher than normal was consistent with extant qualitative studies of persons with myocardial infarction and stroke (Crane, 2001; Schmid et al., 2009). Crane (2001) studied how health knowledge was acquired in 15 older women after myocardial infarction. Crane (2001) found participants acquired knowledge from personal experience, prior learning, listening to their bodies, and making connections between symptoms, and causes. Schmid and colleagues (2009) found that their participants with prior stroke and/or transient ischemic attack relied on their knowledge of their bodies to inform them when something was wrong with their BP. The results of Crane (2001) and Schmid et al. (2009) are congruent with the stories of current study

participants who knew that their BP was higher than normal from listening to their bodies. The current and the extant study results provide a small body of evidence that persons with cardiovascular illnesses acquire and use knowledge from listening to their bodies. The results of the three studies are a useful starting point for further research of how persons with cardiovascular diseases acquire and use knowledge in their self-management. Providers and investigators can develop more effective teaching strategies tailored to how women acquire their knowledge about their disease.

Body changes. Four key findings about body changes were discovered after reflection on the participants' stories. First, several participants directly associated their body changes to their BP. For example, one participant noticed that she automatically gets headaches when her BP is higher than normal. A different participant noticed that a dot in her eye would get larger as her BP increased. The direct connection between body changes and BP that changed from normal is supported theoretically by Rhodes and Watson's (1987) definition of symptoms. Rhodes and Watson (1987) defined a symptom as subjective indicators of a change in an individual's condition (p.242). Rhodes and Watson's definition (1987) can be used as support for identifying the participants' body changes as symptoms of BP that changed from normal (the change in condition). Body changes are referred to as symptoms through the remainder of this chapter.

Second, the women's experiences of HTN as a symptomatic condition with episodic changes departs from commonly held medical views of HTN. Hypertension is often considered to be asymptomatic by healthcare providers (San Pedro et al., 2010; Schoenberg & Drew, 2002). The women in the current study depicted their HTN as a changeable condition with manifested symptoms. Their experiences are not consistent with the view of HTN as asymptomatic. The

current study adds to the existing body of knowledge that HTN is symptomatic from the patient perspective (Middeke et al., 2008; Rose et al. 2000; Schoenberg & Drew, 2002). This study adds a perspective of HTN as a condition that can manifests changes that are subjectively detectable by the patient. This view needs to be described with further research to understand the patient's experience of HTN and symptoms.

Third, most of the symptoms of high BP reported by participants were consistent with hypertensive symptom types reported in extant literature (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008; San Pedro et al., 2010; Schoenberg & Drew, 2002). The principal hypertensive symptoms reported by the women in the current study were headaches, fatigue, vision changes, dizziness, flushing/turning red, palpitations, edema, and hearing/feeling the blood rush to their head. All the symptoms reported in the current study except for hearing and/or feeling blood rush to their head are consistent with extant research of hypertensive symptoms (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008; San Pedro et al., 2010; Schoenberg & Drew, 2002). The sensation of hearing and feeling BP changes needs exploration with additional research.

Fourth, some symptom characteristics (e.g. severity, progression, character) reported by the women in the current study have been described to a limited extent in existing research studies. Some participants in the current study described location of their hypertensive headaches and how they progressed as their BP changes got worse. This finding is consistent with the results of Schoenberg and Drew's (2002) study of older African Americans with HTN who localized their hypertensive headaches. All the participants in the current study reported more than one symptom and/or sensation they attributed to HTN such as headaches, vision changes,

and fatigue. The report of multiple hypertensive symptoms in the current study is similar to studies of women with migraine headaches who experienced visual auras, nausea, and vomiting (Maloney et al., 2006; Ramsey, 2012). The concept of multiple concurrent symptoms is supported conceptually in the theory of unpleasant symptoms (TOUS) (Lenz & Pugh, 2008). In the TOUS, multiple symptoms of an illness can exist concurrently and instigate one another (Lenz & Pugh, 2008). The women in the current study describe more than one symptom that may worsen or progress to other symptoms. The TOUS may be a useful theoretical framework to guide future research of the hypertensive symptom experience.

In summary, the women in the current study could tell that their BP was high when they experienced symptoms. They directly connected their symptoms to high BP. The women also characterized HTN as symptomatic with episodic changes from their perspective. Many of the participants' symptoms of changed BP have been described in existing studies (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008; San Pedro et al., 2010; Schoenberg & Drew, 2002). The participants also described symptom characteristics such as severity, progression and multiple concurrent symptoms that are supported theoretically in common symptom theories. The current study is an exploration of the hypertensive symptom experience for women with HTN.

I know my triggers. The women's' exposure to triggers (e.g., emotional situations, stress, excess sodium, and fatty foods) that raised their BP is similar to the results of two qualitative studies of African Americans with HTN (Lukoschek, 2003; Schoenberg & Drew, 2002). The participants in the current study described being aware of their BP rising after exposure to a trigger such as eating salty or fatty foods, being under stress or in an emotional situation. Some

women experienced a distressful hypertensive symptom such as turning red or hearing their BP rise in their head after their exposure. The African Americans in Schoenberg and Drew's (2002) study felt headaches after eating excess fat and sodium. Participants in Lukoschek's (2003) study reported that emotion and stress makes their BP "go right up" (p.573). The report of stress and emotional triggers immediately causing BP to increase among Lukoschek's (2003) participants is consistent with the current study participants who found that their BP went up immediately after exposure to the trigger. Two implications arise from the results of the current study relative to exposure to triggers causing immediate BP changes in women with HTN. First, the current study results provide additional empiric support to Lukoschek's (2003) study that African Americans do experience immediate BP rises from exposures to triggers. Second, the current study adds to existing knowledge that immediate BP increases occur in response to triggers among European American as well as African American women with HTN. Further research of immediate BP increases among women in response to triggers is needed beyond the existing two studies.

In summary, the women in the current study could tell that their BP was changed in response to their experienced symptoms and/or exposure to triggers. The PI of the current study would refine her definition of a perceived BP change based on the participants' responses of their awareness. Perceived BP changes would be defined now as an awareness a person has of an immediate increase in his or her BP based on experienced body changes and/or exposure to triggers.

Many women who were sure or certain they could tell their BP was high differ from participants in qualitative research of migraines (Moloney et al., 2006; Rutberg & Ohrling, 2012). Some women in the current study were very sure their BP was high based on their

symptoms. Their most commonly reported symptom of high BP was headaches. The existing research population most similar to the women in the current study is women with migraines. The sense of certainty among many women in the current study was not consistent with the reports of participants in the qualitative studies of migraines. The women with migraines reported that their lives were plagued by uncertainty as their headaches were constantly changing and unpredictable in nature (Moloney et al., 2006; Rutberg & Ohrling, 2012). The women in the qualitative studies found themselves needing to be ready for whatever may happen due to the unpredictability of their headaches (Moloney et al., 2006; Rutberg & Ohrling, 2012). In contrast, many current study participants described knowing and being sure that their BP was high when they experienced their headaches. The headaches described in the current study may be less ambiguous to those participants since they believed their rising BP was the precipitating cause. Uncertainty is a condition that exists when an individual cannot “determine the meaning of illness-related events” (Mishel & Clayton, 2008, p.55). The current study participants may have been better able to determine the meaning of their headaches than the qualitative study participants with migraines thus avoiding or reducing uncertainty. Certainty may exist along a continuum in women with HTN as some participants in the current study were not so sure that they could always tell their BP was high. Further studies are needed to understand and define the concept of certainty and distinguish it from Mishel & Clayton’s (2008) concept of uncertainty.

The distinction between uncertainty and certainty may have a role in symptom self-management. For example, the women in the qualitative studies of migraines found their headaches to be changing and unpredictable, requiring the preparation of different types of actions in anticipation of their symptoms. The participants in those qualitative studies may have

been more uncertain because their headaches and their character are ambiguous, an antecedent factor of uncertainty (Mishel & Clayton, 2008). The current study participants may have been less ambiguous and more certain about their body changes from their BP. In turn, the women in the current study often had an established set of actions they used to care for their BP changes and/or distressful symptoms. Providers and investigators need to inquire if women with body changes are certain about their BP changes and if they have an established set of actions to alleviate these changes.

In summary, many women in the current study could tell their BP changed from knowing their bodies and experienced changes, and triggers. The certainty that the women had about their BP differed from the uncertainty was not characterized in research studies of persons with migraines. Certainty may have a role the self-management of BP changes. Further studies are needed to describe the role of certainty in guiding self-management.

Subtheme: Tending to it. “Tending to it” emerged as an essential subtheme of the study as all participants acted to “tend” to their BP change. The women’s intent behind “tending to it” was to get their BP down and ameliorate and eradicate any distressful symptoms as soon as possible. One participant stated that if she did not tend to her BP promptly, her symptoms would progress as her BP change got worse. The participants used five types of actions to acutely manage their elevated BP: (a) making sure, (b) calming down, (c) being still, (d) taking extra medicine, and (e) going to the doctor. Many women in the study were directly queried about the expected outcome of promptly tending to their high BP. Most women stated they expected their BP to come back down. A couple participants wanted to get rid of their headaches directly. The women did not directly state that getting their BP down was a means to achieve symptom relief.

The relief of symptoms by getting BP back to normal is an unexplored relationship with an unclear mechanism that needs to be developed and described further with more research.

Making sure. Many participants in this study took steps to make sure that their subjectively experienced body changes were due to high BP. Their actions to “make sure” included measuring their BP, taking medicine, and seeing their doctor. The actions served as information sources for the participants to confirm or refute a high BP as the cause of their symptom(s). The participants believed it was important to distinguish what was happening in their bodies. In turn, when the women confirmed their BP change, they could take the appropriate action without wasting time.

The act of “making sure” performed by the women in the current study are consistent with the results from qualitative studies of persons with HTN and women with migraines (Gohar et al., 2008; Moloney et al., 2006; Tsiantou, Pantzou, Pavi, Koulierakis, & Kyriopoulos, 2010). Participants with HTN in the studies of Gohar et al. (2008) and Tsiantou et al. (2010) checked their BP when they were not feeling well to confirm if their BP was high. These results are consistent with some women in the current study who checked their BP using cuffs in their homes, drug store, or going to their doctor’s office. Similar to the current study participants, women with migraines studied by Moloney and colleagues (2006) took sinus medication and OTC pain relievers to ascertain if their headaches were attributable to sinus disorders or tension and stress versus migraines. The current study results added additional empiric support for the concept of acting to make sure that manifested symptoms actually represent a changed BP. The confirmatory steps taken by the women in the current study are consistent with the results of other persons with HTN or migraines in extant research.

Tending to it actions. Many actions taken by the women in the current study to tend to their BP change are similar to the results of extant studies of women seeking episodic relief from migraine headaches (Hansen, Hansen, & Holstein, 2008; Moloney et al., 2006; Ramsey, 2012; Rutberg & Ohrling, 2012). Women with migraine headaches reported taking analgesic medications and lying down and going to bed (Hansen et al, 2008; Moloney et al., 2006; Ramsey, 2012; Rutberg & Ohrling, 2012). The participants in the current study may have had similar symptoms and took similar actions to the women with migraines. There is one notable difference between the women in the current study and the participants with migraines. The women with migraines took action to directly relieve their symptoms. The women in the current study differed as they acted to return their BP to normal. The current study is an initial exploration of BP-driven symptom self-management in persons with HTN. More studies are needed of persons with HTN to completely characterize and develop the concept of BP-driven symptom self-management.

Subtheme: The wakeup call. Some women in the current study needed a “wakeup” call” or stimulus to take their HTN and self-management seriously that has not been well documented in extant research. These participants got a “wakeup call” about their HTN in the form of a major health problem such as a stroke or TIA. The catastrophic health problem in turn was a stimulus for many women to decide to care for themselves and realize their HTN was a serious health problem. The current study participants’ descriptions of “wakeup calls” are similar to results of patient and partner dyads after myocardial infarction (MI) (Panagopolou, Triantafyllou, Mitziori, & Benos, 2009). The “patient” participants experienced a “wakeup call” in the form of their MIs that acted as a “catalyst for change” (Panagopolou et al., 2009, p.294). The patient participants

were galvanized to take action to improve their health and prevent another MI (Panagopolou et al., 2009). The current study participants are similar to Panagopolou et al.'s (2009) participants in their descriptions of experiencing a need to change after having a catastrophic health event. The current study also adds more knowledge about the concept of wakeup calls in chronic and catastrophic illness. There are two important considerations for clinicians and investigators that emerge from the results of the current study and Panagopolou and colleagues (2009). Providers should assess their patients after a major illness event (i.e., stroke or MI) in conjunction with a chronic illness for a wakeup call. Patients may initially be stimulated to make key lifestyle changes after such an event. Providers can encourage and support their patients' self-management efforts. Second, a database search of "wakeup calls" in conjunction with health yielded results about providers as the subjects. The concept of a wakeup call is not new for providers who are often stimulated to change their clinical practice and/or attitudes. Wakeup calls for patients may be an underexplored but important concept that merits further description through research.

Subtheme: Doing it right. All the women in the current study talked about the importance of "doing it right" when it came to managing their HTN on a day-to-day basis. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) is the evidence-based standard of care for HTN management in the United States (Chobanian et al., 2003). The recommendations for controlling BP include the prescription of antihypertensive medications and non-pharmacologic strategies such as limiting sodium and alcohol intake, maintaining a healthy weight, eating a diet that includes fruits and vegetables, getting physical exercise, and avoiding tobacco (Chobanian et al.,

2003). The women in the current study referenced many strategies they used to care for their BP themselves on a day to day basis: (a) reducing stress, (b) watching their diet, (c) getting exercise, (d) losing weight, (e) stopping smoking and drinking, (f) trying home remedies, and (g) taking medicine. Many of the JNC 7 recommendations are represented among the participants' strategies to take care of themselves. Many women discussed "doing it right" or "taking good care of myself" relative to what they knew to be the right things to do for their BP. The women may have developed their beliefs as a result of encounters with many sources such as providers, family members, social media, and the internet. The women's belief about doing a "good job" or "the right way" has an important implication for clinical practice. Providers can assess their patients for this belief by asking their patients with HTN to describe how they think they are doing (e.g., good, fair, poor) in terms of managing their BP. Patients can then be queried about their personal behaviors that they believe constitutes "doing it right". Providers might find that their patients are taking actions that may or may not be consistent with the JNC 7 guidelines. Providers can work to foster and guide their patients' beliefs and desires "to do it right" with counseling and education about recommended JNC 7 behaviors. The participants' daily strategies to "do it right" to care for themselves is discussed in context with extant quantitative and qualitative research, home remedies, and doctors.

Daily BP self-management: Quantitative research. Many daily BP control strategies employed by current study participants to "do it right" are consistent with the results of quantitative studies of persons with HTN (Valderrama et al., 2010; Zhao, Ford, & Mokdad, 2008). At least 50 % of the 844 women studied by Valderrama et al. (2010) and 36,000 women studied by Zhao et al. (2008) took their antihypertensive medication, maintained a healthy

weight, and avoided sodium and alcohol. The behaviors described in the two quantitative studies are consistent with many self-management strategies cited by the women in the current study. The greatest variation occurred in reports of getting exercise. Zhao and colleagues (2008) found that 29.3 % of their African American and 42.9 % of European American participants engaged in exercise. Valderrama and colleagues (2010) reported an aggregate 64.7 % of women reported exercise as a means to control their BP. The two groups of investigators reported the exercise frequencies of their participants differently limiting the ability to directly compare results. Yet, the PI of the current study believes that her study participants may resemble the Zhao et al.'s group in terms of their engagement in exercise. Very few of the current study participants described their physical exercise routines. Most of the current study women talked about "intending" or "needing" to exercise more often than what they actually did. Providers need to assess their patients' routines of what they do to care for themselves.

Daily BP self-management: Qualitative studies. Other routine BP self-care behaviors referenced by many current study participants (i.e., managing stress and eating) were consistent with extant qualitative research of Africans Americans with HTN (Fongwa et al., 2008; Schoenberg & Drew, 2002; Webb & Gonzalez, 2006). The 47 women studied by Webb and Gonzalez (2006) found it extremely difficult to find the time to care for themselves with the "day-to-day hassles" in their lives as mothers, wives, and employees (p. 261). Daily stressors, mostly family related, and the need to control them was described as important to controlling BP by the participants studied by Fongwa et al. (2008) and Webb & Gonzalez (2006). Other participants underscored the changes they made such as eliminating fat, oils, and rich food from their diets keep their BP down (Fongwa et al., 2008; Schoenberg & Drew, 2002). The results of

the qualitative studies are consistent with the references made by the current study participants about their daily BP self-management practices. Most research attention is focused on African Americans. One possible reason for the greater attention may be that African American women have a higher prevalence of HTN (47%) compared to their European American counterparts (30.7%) (Go et al., 2013). Hypertension is a greater problem for in the African American community. Yet, many of the European American participants in the current study were as challenged to control their life stressors as the African American participants. Further studies are needed to ascertain similarities and differences between ethnic groups around self-management practices.

Home remedies. Many African American participants in the current study used home remedies to control their BP that have been described in extant literature (Fongwa et al., 2008; Schoenberg & Drew, 2002). The women described drinking bitter melon tea, apple cider vinegar, and using garlic to manage their BP. Many participants learned about the home remedies from their friends and family members who have HTN. These self-management practices are not consistent with JNC 7 guidelines for BP management (Chobanian et al., 2003). None of the European American participants in the current study used any of the alternate strategies when directly queried by the PI. The strategies described by the African Americans in the current studies are consistent with the remedies reported by African American participants with HTN in extant research (Fongwa et al., 2008; Schoenberg & Drew, 2002). The use of “home remedies” among the African American participants has an important clinical implication. Providers may be unaware that their African American patients are using these alternate strategies as a means to control their BP. Providers should query all their patients with HTN to assess for the use of

alternate strategies to control their BP. The assessment of alternate self-management strategies by providers may be particularly useful among patients who are not meeting BP control goals.

Doctors. Doctors were viewed by current study participants in two different contexts. First, doctors were considered to be important by the women in their efforts to keep their BP down. The women needed their physicians to get their prescription medications, and to inform and educate them about their lifestyle behaviors that would help get their BP down. Many women in the study were distressed and scared when they lost access to their physicians when they lost their insurance after a job loss. Some women also got important messages about their BP control and self-management after their encounters with their doctors. Some participants reported they were told they were doing well by their doctors in their BP self-management when their BP was controlled or not doing so well if their BP was high. The confirmation of the BP self-management efforts by their physicians was important to participants. Second, many women in the current study were dissatisfied with physicians when they only received prescriptions and did not get the time and attention they wanted and needed with their doctors to talk to about their BP and health in a way that they could understand. This perspective that the current study participants hold about their doctors being too busy has been described in Moloney and colleagues' (2006) study of women with migraines during menopause. Physicians were depicted by Moloney et al. (2006) as too busy to talk and dismissive of the participants' symptoms. The perspectives of the women in the current study and Moloney et al.'s (2006) participants have two important implications for clinicians of persons with HTN. First, patients listen very carefully to the direct and inferred messages conveyed by their clinicians about their self-management and health status. Providers need to listen and choose the message(s) they send to their patients

carefully. Patients who may not have reached their provider's goal(s) for them but show improvement need encouragement. Second, providers need to work with their patients to identify key mutual concerns and priorities to be addressed over a series of encounters.

In summary, many women in the current study described how they “did it right” by engaging in several recommended BP self-management behaviors on a daily basis. Most of the actions taken by the women are consistent with the results of quantitative and qualitative research studies. Three key observations emerged after reflecting on the women's stories in context with the extant research studies. First, European American women have not received the research attention given to African American women with HTN. The current study adds needed knowledge about the daily BP self-management practices of European American women. Second, many African American participants used home remedies to control their BP that they learned from family and friends. The use of alternate BP strategies may be one explanation for not meeting BP goals in a group with high HTN prevalence. Third, many women needed their physicians as key partners to help them “do it right” but were often left frustrated and dissatisfied after their encounters.

An important observation that emerged after reflection on the women's experiences is the possible coexistence of both day-to-day BP and episodic BP-driven symptom management. Earlier in this chapter, many women in the current study described how they took various actions to “tend” to their elevated BP responsible for the distressful symptom(s). Many women also described their daily BP management. The end goal for both types of self-management is getting their BP back to normal. Further research is needed in women with HTN who experience

hypertensive symptoms to describe and characterize this hypothesized premise of using two types of self-management to control their BP.

In summary, reflection on the essential themes in context with the extant literature yields three important observations. First, the current study is an exploration in women with HTN to describe (a) getting back to normal, (b) their awareness of BP changes, (c) tending to BP changes to manage distressful symptoms, (d) getting a serious stimulus for making changes, and (e) doing the right things for themselves and with their doctors on a day-to-day basis for BP control. The PI had to use extant research studies of women with similar types of symptoms (e.g., headaches) and other cardiovascular diseases to empirically confirm the essential central theme and subthemes. Much of the extant research focuses on African Americans with HTN. The current study, with the inclusion of European Americans, describes a perspective of many women with HTN who have not been substantively represented in extant research.

Reflection of the Essential Themes within Key Theoretical Perspectives

Three theoretical perspectives from different disciplines (nursing, anthropology, and psychology) have key roles in reflection and discussion of the essential themes. The nursing theoretical perspective is represented by the theory of self-care (Orem, 1987/2001). The theory of self-care also provides a guiding theoretical framework to depict the structure of the study phenomenon as an action sequence. The essential central theme and subthemes form the structure of the study phenomenon and precede the discussion of nursing's theoretical perspective (van Manen, 1990).

The disciplines of anthropology and psychology were hypothesized by the PI at an earlier point to have a major theoretical influence on the development of the study phenomenon. The

representative authors cited by the PI were Kleinman (1988) from anthropology and Leventhal and colleagues (2003) from psychology. These theoretical perspectives provide a useful lens for reflection and discussion of the essential central and subthemes. The reflection of the central and subthemes within anthropology and psychology follow the reflection from the nursing theoretical perspective.

Reflection from the nursing perspective. The structure of the phenomenon of self-managing perceived BP changes is represented by the essential central and subthemes of the current study (van Manen, 1990). van Manen (1990) suggested that “phenomenological themes may be understood as the structures of experience” (p.79). Using van Manen’s premise about themes for guidance, the structure of the experience of self-managing perceived BP changes consists of the central theme of “getting to normal” and the subthemes of (a) “I can tell”, (b) “tending to it”, (c) “the wakeup call”, and (d) “doing it right”. A further interpretation of the study themes is possible with the application of Orem’s (1987/2001) theory of self-care as a guiding framework. Two useful outcomes occur when the theory of self-care is used to guide further reflection of the essential themes (Orem, 1987/2001). First, the structure of the women’s experiences can be identified as an action sequence that they used with the expectation of getting back to normal. The first section is an overview of theory of self-care (Orem, 1987/2001) and the constituent components. The second section is a description of the structure of the women’s experiences of self-managing their perceived BP changes as an action sequence.

The theory of self-care. The TSC is one of three theories that comprise Orem’s (1987/2001) self-care deficit nursing theory (SCDNT). The TSC focuses on the individual and relies on the principal assumption that persons take deliberate action to achieve an anticipated

goal or outcome (Orem, 1987/2001). Orem hypothesizes that a person moves through a process of three phases or self-care operations with their own “action components” (Orem, 2001, p. 65). The first phase is estimative operations with an expected outcome of the constituent actions is knowledge (Denyes, Orem, & Beckel, 2001; Orem, 1987/2001). An individual’s actions within this phase include investigation of internal and external conditions, and the interpretation of the meaning of the condition(s) (Orem 1987/2001). The second phase is transitional operations and the outcomes are decisions about preferred courses of action (Orem, 1987). Orem (1987/2001) suggests that the key actions in this phase are reflection to determine what an individual should do and decision making about options for self-care. The third phase is productive operations and the outcome is self-care action (Orem, 1987/2001). Key actions in this phase include preparation of the self, necessary materials, and the environment (Orem, 1987/2001). The result of the self-care operational process is the achievement of or movement toward an outcome that is anticipated by the individual.

The structure of women’s experiences. Self-care operations, a central concept of the theory of self-care, can be used as a guide to depict the essential central and subthemes as an action sequence the participants used to get their BP to normal (the desired or focal condition) (Denyes et al., 2001; Magnan, 2001; Orem, 1987/2001). Each of the three self-care operational components is compared to the study central and subthemes to describe the structure of the experience of self-managing perceived BP changes.

Estimative operations. The current study subthemes of “I can tell” and “making sure” are consistent with the estimative operations phase in the theory of self-care (Denyes et al., 2001; Orem, 1987/2001). In “I can tell”, participants experience an awareness of a change in their

internal conditions in the form of a BP change. Their awareness is based on their symptoms and exposure to internal and external sources or triggers such as stress, emotion, or food. In turn, the women believed that the meaning(s) of their symptoms was that their BP is elevated higher than normal. Some women were certain their BP had risen based on how they felt, while others needed to investigate these internal changes by “making sure” the symptoms were due to their BP. Once the BP was determined to be the cause of their symptoms, the participants then determined that a course of self-management was necessary to return their BP back to normal. The actions of the participants reflects Orem’s (1987/2001) descriptions of investigating the internal and external conditions and assigning meaning within estimative operations. The investigation and assignment of meaning characterized by the study participants are activities that are largely perceptual and cognitive in nature but important components of the self-management process.

The knowledge of their bodies described by the current study participants is consistent with the type of knowledge required for self-care referenced in estimative operations (Orem, 2001). In this phase, individuals performing self-care must have “empirical knowledge of events and internal and external conditions, and antecedent knowledge” (Orem, 2001, p. 275). The knowledge of their bodies described by study participants was consistent with the knowledge of internal conditions (Orem, 2001). The women in the current study relied on the knowledge of their bodies to help them determine that their BP was changed from normal. Many women in the current study referenced a strong belief of certainty around their knowledge that their BP was elevated. They not only knew but were sure that they knew their BP was changed. Other women were not always sure or certain they could tell their BP was higher than normal. The women’s

beliefs about certainty may exist along a continuum from uncertain to very certain. These beliefs about certainty are not reflected in Orem's (1987/2001) conceptual and theoretical writings. The current study results may contribute the concepts of uncertainty and certainty to extend estimative operations (Orem, 1987/2001). The inclusion of uncertainty and/or certainty as constituent components of estimative operations is tentative until further research is done to verify the premise.

Transitional operations. The participants' "the wakeup call" reflects transitional operations in the theory of self-care (Orem, 1987/2001). Orem (2001) postulated that transitional operations are the self-care operational phase that involves reflection and decisions about potential courses of action. The wakeup call represents both reflections and decision made by the participants about their BP. There was a direct and inferred reflection made by the women who got a wakeup call. Two women directly mentioned that they did not do what they should have been doing to take care of their BP before their wakeup call. The two participants' recognition of what they did not do to take care of their BP may have occurred after reflection on their prior choices about taking medicine, eating, and getting exercise. The participants' desire to make a change after the wakeup call may involve reflection that is inferred but not stated about their previous choices that did not yield desired outcomes for their BP. All four women received a strong impetus or stimulus to change in the form of a major health threat attributed to their BP. The decisions reported by the four participants after their wakeup calls was that their BP was serious and needed self-management. There are three implications from the women's stories relative to transitional operations. First, the participants may have reflected on their prior choices and the resulting outcomes before and after the wakeup call. Second, the four women needed a

tangible stimulus to change in the form of a major health threat. The need for an impetus to change is not described in the theory of self-care (Orem, 1987/2001). Finally, there may be multiple decisions that result after reflection and the receipt of a stimulus. The acts of reflection, decision-making and receiving a stimulus to change appear to have important roles in self-management that are not well developed or described in research. Further studies are needed to delineate the concepts and roles of reflection, decision making, and receiving a stimulus to change as well as their relationships to one another.

Productive operations. Productive operations is an operational phase in the theory of self-care with a task of "monitoring for evidence of effects and results" (Orem, 2001, p.259). The experiences of the women in the current study are consistent with productive operations in two ways. First, many women were looking to return their BP to normal as a result of their "tending to it actions" with episodic changes. Second, many women iterated the importance of "doing it right" in the day-to-day management of their BP. The participants' monitoring the effects of both types of actions for feedback is inferred from their stories. Some women received positive and negative feedback in their efforts in "doing it right" from their doctors. The women might have been self-evaluating their actions to "do it right" but were not queried about this premise in this study. The important question for the PI and/or other investigators to ask in future studies may be "how do you know you are doing it right?"

Desired focal condition. The central theme of "getting to normal" is consistent with Magnan's (2001) concept of a desired focal condition. In a study of self-care and health among persons with cancer-related fatigue, Magnan (2001) hypothesized that desired focal conditions

was an undeveloped concept based on Orem's (1995) deliberate action. Magnan (2001) defined desired focal conditions as:

valued environmental or human states or processes existing or occurring within a range or according to a standard known or hypothesized to be compatible with what is required to keep aspects of human functioning or human development with norms compatible with life, health, and personal well-being (p.65).

Magnan (2001) further suggested that a desired focal condition is an outcome of self-care. Getting to normal may be the desired focal condition for the participants in the current study in two respects. First, the women employed a process of awareness and recognition, tending to episodic changes, and daily actions in their quest to "get to normal". The participants' experiences are consistent with Magnan's (2001) defined terms of process (participant actions) and human state (getting their BP back to normal). Second, getting their BP back to normal had greater meaning for the participants to permit them to live normally and avoid illness, death, and disability. The women's getting their lives to normal is also congruent with Magnan's (2001) definition as they determined that having normal BP as necessary to have a normal healthy life. Thus, Magnan's (2001) definition theoretically supports the central theme of the current study as the participants' desired focal condition.

In summary, the concept of self-care operations (Orem, 1987/2001) was used by the PI to depict the essential themes (i.e., the structure of the study phenomenon) as an action sequence deliberately performed by the participants to return their BP to normal. Many of the subthemes are empirically consistent with Orem's (1987/2001) theoretical premises in estimative,

transitional, and productive operations. The essential central theme, getting to normal, may be the desired focal condition for the women in the study (Magnan, 2001).

Reflection from anthropology and psychology perspectives. The experiences of the women in the current study are consistent with theoretical positions held by anthropologists and social psychologists about symptomatic illnesses (Kleinman, 1988; Leventhal et al., 2003). In the current study, the women described a process that included (a) awareness of changes in their blood pressure, (b) applying bodily and experiential knowledge, (c) confirming the suspected changes, (d) taking acute episodic action, and (e) following recommended BP control actions daily. Many of these actions are consistent with Kleinman's (1988/2006) and Leventhal and colleagues (2003) theoretical assertions about symptomatic illnesses. The anthropology and psychology theoretical perspectives are discussed separately.

The anthropology perspective. Kleinman (1988), a medical anthropologist, hypothesized that patients monitored, appraised, and interpreted their bodily processes when they experience an illness. The explanatory model's approach was a series of seven questions developed for clinicians to assess and understand how patients depict or explain their meaning(s) of a condition or illness (Kleinman, 1988; Kleinman & Benson, 2006). The seven questions include (a) what do you call this problem, (b) what do you believe is the cause of the problem, (c) what course do you expect it to take, (d) what do you think this problem does inside your body, (e) How does it affect your body and your mind?, (f) What do you fear most, and (g) what do you fear most about treatment? (Kleinman, 1988; Kleinman & Benson, 2006). The women in the current study were not queried with seven questions to elicit their explanatory models of their BP changes. Many of the participants' responses could have been answers to many of those questions in an

explanatory model's query. For example, the women called their problem a BP change that was higher than normal and often caused by exposures to triggers. They expected their BP to change episodically and be present on a day-to-day basis requiring management. The women's BP changes caused bothersome symptoms and disturbances to their daily lives. Many women believed that BP that was higher than normal would "wear out their BP system", and cause catastrophic health problems. In turn, many women feared having a major health problem and dying as a result of high BP. A couple women feared and were concerned about the long term effects of antihypertensive drug treatment. In many respects, the participants' responses could be answers to the questions posed by Kleinman (1988) in an explanatory model's query. A health researcher or clinician may be able to elicit many similar responses as described by the PI in the current study using the explanatory model's query.

The psychology perspective. Leventhal and colleagues (2003) are psychologists who hypothesized that individuals with illnesses assume the role of common sense scientists to determine what they are experiencing by constructing multidimensional illness representations. An illness representation is hypothesized to consist of (a) identity (label), (b) cause (attributed origin), (c) timeline (acute, chronic, or cyclical duration), (d) consequences (expected outcomes), and (e) cure and/or controllability (Leventhal et al., 2003). Illness representations are believed to be generated in response to a perceived threat from a condition or illness (Leventhal et al., 2003). The women in the current study were not queried formally about any representation formation. The participants' process of actions were often consistent with Leventhal and colleagues' (2003) premises and content of illness representation as they labeled their symptoms as a BP change (identity), attributed a cause (triggers) and undertook both episodic treatment and daily

management actions (cure and/control). The women also discussed several negative consequences when their BP was higher than normal such as not being able to live normally, having a catastrophic illness, and premature death. The women did not make reference about their expected duration of their BP change (timeline) (Leventhal et al., 2003). Many women mentioned they wanted and needed their BP to return to normal as quickly as possible. Some women also described their serious health threat that came when they received a wakeup call. The women's responses are generally consistent with many dimensions of illness representations. A health researcher studying the illness representations of the current study participants' BP changes may obtain responses reflected in the essential central and subthemes.

In summary, the experiences of the women in the current study are consistent with theoretical perspectives of nursing, anthropology, and psychology. The common threads between the three perspectives are that people with illnesses monitor themselves, determine what the changes mean, ascertain any consequences, and take action to self-manage the condition. The participants depicted an action sequence to self-manage their BP changes that consist of many of the common elements of the three theoretical perspectives. The action sequence concepts and any relationships between concepts need description and confirmation through future research.

Reflection on the Lifeworld Existentials Relative to Extant Research

van Manen's (1990) life world existentials (lived space, lived body, lived space, lived relations) were important guides for the PI's reflection on the women's experiences of self-managing their perceived BP changes in two respects. First, the PI was able to discover deeper meanings and a greater understanding of the women's experiences using the existentials as guides. Second, the four existential themes are common to all lifeworlds regardless of the

phenomenon, or “historical, cultural, and social situatedness” of the individual(s) under study (van Manen, 2011c). The premise that the four common lifeworld existential themes exist across experiences supports the use of women with migraine headaches as empiric references for the women in the current study. The women with migraine headaches have similar bothersome headaches as the current study participants. The following paragraphs describe the four lifeworld existentials of lived space, lived body, lived time, and lived relations of the current study participants in conjunction with extant literature.

Lived space. Lived space for the women in the current study are similar to studies of women with migraines who described retreating to a safe space when symptomatic (Moloney et al., 2006; Ramsey, 2012). van Manen (2011d) considered lived space as “the ways we experience spatial dimensions in our day-to-day existence”. The women in the current study described retreating to their beds as their safe space when they were not feeling well. The concept of wanting to feel safe and protected in their space was best represented a participant who described how she wrapped herself in a figurative “cocoon” when her BP went up. The current study participants’ responses about retreating to a safe place when symptomatic are similar to the results obtained by Moloney et al. (2006) and Ramsey (2012). The participants in the two migraine studies retreated to a preferred space that would give them comfort and relieve their pain when experiencing bothersome migraines. The women in the current study differed from the participants in the extant research studies of migraines in their expectations about what would happen when they retreated to a safe place. The women in the studies of Moloney et al. (2006) and Ramsey (2012) retreated to a preferred space with the expectation that they would

relieve their distressful migraines directly. The participants in the current study may have expected to get their BP down to normal directly or as a means to relieve their symptoms.

Lived body. The current study participants' references to their lived bodies were partially consistent with qualitative studies of women with migraines (Moloney et al., 2006; Rutberg & Ohrling, 2012). van Manen (2011e) believed that "in our physical or bodily presence we both reveal something about ourselves and we always conceal something at the same time". The women in the current study had BP changes that were concealed from and/or revealed to others in their lifeworlds. The participants had BP changes that manifested concealed symptoms (e.g., headaches, vision changes, feeling tired, dizziness) experienced only by the holder. The concealed BP changes would not be visible to others. The concealed BP changes are similar to the experiences of women with migraines who characterized their headaches as "an invisible disorder" without visible abnormalities (Rutberg & Ohrling, 2012, p. 333). Yet, some current study participants had BP changes that revealed themselves through visible symptoms such as turning red or flushing. The concept of revealing and/or concealing BP changes is consistent with van Manen's (2011e) assertions about the lifeworld existential theme of lived body. The women in the current study both concealed and revealed their BP changes to other persons within their lifeworlds.

Lived time. The women in the current study differed from extant study participants with migraines in their experiences of lived or subjective time (Moloney et al., 2006; Ramsey, 2012). van Manen (1990) characterized lived time as "our temporal way of being in the world" (p. 104). The current study participants experienced delays in being able to live their daily lives waiting for their BP to go down after a relieving action such as extra BP medicine or resting. The

experiences the women in the current study held about lived time differed from women with migraine headaches (Moloney et al., 2006; Ramsey, 2006). Moloney and colleagues' (2006) and Ramsey's (2012) participants with migraines described having to hurry and maximize their symptom-free periods to meet their responsibilities in their lifeworlds. The differences between those participants' and the current study participants' sense of subjective time may be explained by the nature of the symptoms and/or changes. The women with migraines characterized their headaches as unpredictable and changeable (Moloney et al., 2006; Ramsey, 2012). In turn, those participants may have been uncertain as to how long their migraine-free periods would last and believed they needed to hurry to meet their daily responsibilities. In contrast, the current study participants were often certain that they knew when their BP was higher than normal and probably expected to feel unwell for that period of time. The current study participants may have believed that it was worthwhile and/or necessary to wait for their actions to lower their BP to give them symptom-free periods.

Lived others. The current study participants' two types of experiences of lived others are partially consistent with the experiences of women with migraine headaches (Ramsey, 2012; Rutberg & Ohrling, 2012). van Manen (2011g) characterized the existential theme of lived others (or relationality) as "the lived relation we maintain with others in the interpersonal space that we share with them". The first type of experience the women in the current study described was a sense of isolation and withdrawal from others when they felt their BP rising. Some women felt a need to withdraw and isolate themselves from their families and coworkers who were often a source of negative emotion and/or stress. In turn, they would feel their BP change with the onset of their distressful symptoms. The act of withdrawal and isolation was an important means for

the women to avoid and/or mitigate BP changes. Participants in Ramsey's (2012) study described avoiding others when they had a migraine because the act of concentrating made the pain worse. Women studied by Rutberg and Ohrling (2012) would preemptively avoid friends and families as they never knew when they would have a migraine. The experiences of the women in the current study are most similar to Ramsey's (2012) participants that withdrawing from others was a means to eliminate distress. The current study participants differ from both Ramsey's (2012) and Rutberg and Ohrling's (2012) participants with migraines in trying to remove themselves from sources of BP change rather than removing themselves to directly relieve distressful symptoms.

The second type of experience held by the current study participants about their relationships, engaging with others who could help, was partially consistent with women who had migraine headaches (Moloney et al., 2006; Ramsey, 2012; Rutberg & Ohrling, 2012). Many women in the current study approached their doctors to give them their medicine, information about self-management, and reinforcement of their progress. Many women spoke extensively about needing their doctors but also left frustrated when they did not get what they wanted and needed from their encounters. The women's experiences of their relationships with doctors are similar to the reports of women with migraines (Moloney et al., 2006; Ramsey, 2012; Rutberg & Ohrling, 2012). The participants in the three migraine studies went to their doctors for help but often felt like the distress they had was not believed or taken seriously (Moloney et al., 2006; Ramsey et al., 2012; Rutberg & Ohrling, 2012). The current study participants and women with migraines needed their relationship with their doctors to get medicine and advice. The

relationships with doctors may not have been beneficial or satisfying for the women based on the negative feedback depicted in the group of studies.

Some women in the current study differed from the participants with migraine headaches in receiving support from friends in getting their BP back to normal (Rutberg & Ohrling, 2012). A few participants described calling friends when they were angry or stressed or getting help making smart food choices and shopping. These actions were considered to be important by the participants to get their BP back to normal. In contrast, the women with migraines studied by Rutberg & Ohrling (2012) experienced feelings of isolation and suffered their headaches in silence. The roles and contributions of friends and family in helping persons with HTN getting their BP to normal needs exploration with further research.

In summary, the women in the current study were often negatively impacted in their lifeworlds by their BP changes. The participants retreated to a safe space (lived space), concealed and revealed their BP changes (lived body), lost time waiting for their BP to go down (lived time), avoided others and triggering situations, and used and relied on their friends and doctors for help to get their BP to normal (lived others). Doctors were viewed as important partners but the relationships were not always portrayed favorably by the women

The experiences in the lifeworlds of women in the current study are partially consistent with women who have migraines. There were partial similarities between the groups in terms of retreating to a safe place, concealing their distress, and avoiding others when symptomatic. The two groups of participants differed in terms of revealing symptoms, losing or rushing subjective time, and preemptively withdrawing from others. There are two likely explanations for the differences between groups. First, the women with migraine headaches described their symptoms

as uncertain and unpredictable. The consequence of this uncertainty may be the need to rush when they feel good since they may not know when they will get a migraine. The current study participants were certain that they knew their BP had changed. This sense of certainty may have afforded the women the time to wait for their BP to improve. Second, the fundamental difference between the groups is that the women with migraines were acting to prevent or relieve a distressful symptom. The women in the current study acted to prevent or alleviate a BP change that caused the distressful symptom. Further research is needed to better describe and understand how the existential lifeworld of impacted individuals is affected by BP changes.

Contributions of the Study to the Discipline of Nursing

Nursing as a Discipline

The discipline of nursing has both a scholarly and a societal mandate “to develop, disseminate, and use knowledge” (Barrett, 2002, p.55). In contrast, other disciplines (e.g. physics, philosophy, mathematics) may have a more scholarly mandate to conduct research and develop knowledge for the sake of knowing without an expectation that it will be used or applied for practical purposes (Fawcett, 2005). The distinction between nursing and other more academically focused disciplines is that nursing has a demand from society to provide nursing care (Donaldson & Crowley, 1979). To meet this demand, nurse scientists and clinicians must develop, disseminate, and use knowledge to provide nursing care to those in need (Barrett, 2002).

The discipline of nursing is hypothesized to consist of nursing science and nursing practice (Donaldson & Crowley, 1979; Fawcett, 2005). Nursing science is achieved through nursing research with an emphasis on the development and dissemination of knowledge

(Fawcett, 2005). The nursing profession is “actualized through nursing practice” with an emphasis on utilization and evaluation of knowledge (Fawcett, 2005, p.591). Nursing science has been defined by Schlotfeldt (1988) as the domain of the discipline that “represents all of nursing’s scientific subject matter” (p. 18). Nursing’s scientific subject matter is further described as the “verified facts, principles, and laws discovered through scientific inquiry” and includes “extant nursing theories that guide scientific inquiries” (Schlotfeldt, 1988, p.18). This definition of nursing science and nursing’s scientific subject matter is useful to guide a discussion of the contribution of the current study to nursing science and ultimately the discipline of nursing.

The contribution of the current study to the science of nursing will be discussed in two ways. First, the current study is an example of nursing research by including three of the four nursing metaparadigm concepts identified by Fawcett (2005). Nurse theorists have suggested that research done by nurses that does not include nursing’s metaparadigm concepts (i.e., nursing humans, health, and the environment), and that generates or tests theories from other disciplines is not nursing research and builds the knowledge of disciplines other than nursing (Barrett, 2002; Fawcett, 2005). If a study is not nursing research, it may not contribute to the discipline of nursing in a substantive way.

Second, the current study explicates key concepts of the theory of self-care, an existing nursing theory (Orem, 1987/2001). A research study that contributes to extant nursing theory (e.g., nursing’s scientific subject matter) makes a contribution to nursing science (Barrett, 2002; Schlotfeldt, 1988). In turn, a study that contributes to nursing science through building extant theory contributes to the discipline of nursing. The relationship of the current study to nursing’s

metaparadigm will be discussed followed by the contribution of the study to the theory of self-care.

Relationship of the Study to Nursing's Metaparadigm

The current study is related to nursing's metaparadigm through the concepts of humans, health, and the environment (Fawcett, 2005). Fawcett (2005) contends that the metaparadigm is important to the discipline as members can state "This is who we are and this is what our work is about" (p. 5). Nursing's metaparadigm concepts are humans, health, the environment, and nursing (Fawcett, 2005). The current study included three metaparadigm concepts (humans, health, and the environment) with its focus on women with perceived BP changes and not on nursing. The relationship of the study to these three metaparadigm concepts will be discussed separately.

Humans. The metaparadigm concept of humans is related to the current study through its focus on the participants. Fawcett (2005) defined the concept of humans as the individual either singly or in groups, families, communities, or aggregates. The study phenomenon was explored by the PI in interviews of thirteen women who shared their stories with the PI. In turn, the PI interpreted and aggregated their individual stories to articulate the structure of the study phenomenon. The study results and reflection are a direct outcome of the life experiences of thirteen individuals who were the focus of the study.

Health. The metaparadigm concept of health is broadly represented in the current study in three ways. Fawcett (2005) defines "health" as "the human processes of living and dying" (p.6). First, the women characterized an adverse change in their health when their BP changed from normal. Second, the BP change away from normal impacted their ability to live and

function normally. Third, the women characterized a process they used to get their BP and themselves back to normal in the essential themes. These premises are consistent with Fawcett's (2005) assertions of health as a process of living.

The environment. The metaparadigm concept of the environment is represented in the current study in five ways. Fawcett (2005) defined the environment as "human beings, significant others, physical space, and cultural, economic, and political conditions" (p.6). First, some women were negatively affected by persons in their environment when they would experience stress and/or emotion that caused their BP to change. Second, a few women got instrumental support to help them get and keep their BP normal. Third, doctors were major partners for all the women in getting their BP normal. Fourth, many women had difficulty getting access to care and needed medicine when they lost their insurance. Fifth, many women retreated to a safe physical space when they experienced symptoms of BP changes. The metaparadigm concept of environment is directly reflected in the women's stories of their friends, families, doctors, economic hardships, and actions (Fawcett, 2005).

In summary, the nursing metaparadigm concepts of humans, health, and the environment are represented in the women's stories and in the PI's subsequent interpretation and reflection. The study meets Barrett's (2002) challenge to demonstrate that the current study is an example of nursing research and more than a study done by a nurse by through a connection to three metaparadigm concepts.

Contribution of the Study to Nursing Science through Theory

Nursing science has been defined as "a basic science [that] is the substantive discipline-specific knowledge that focuses on the human-universe-health process articulated in nursing

frameworks and theories.” (Barrett, 2002, p. 57). The current study develops knowledge and contributes to nursing science by explicating the concept of self-care operations within the theory of self-care (Orem, 1987/2001). Orem (1988/2001) hypothesized that two types of knowledge exist for nursing, “speculatively practical” and “practically practical” knowledge. Speculatively practical knowledge is broad and universal in its content and inclusive theories (Orem, 1988/2001). The self-care deficit theory of nursing (SCDNT) is considered to be an example of speculative knowledge as it subsumes the theory of nursing systems, theory of self-care deficit, and theory of self-care (Orem, 2001). Practically practical knowledge is considered to be more concrete with specific “details of cases” and “proximate rules for action” (Orem, 1988, p. 77). Orem (1988/2001) asserted that practically practical knowledge was “more particularized” and clinically-focused and specific to patient care situations than the more theoretical speculatively practical knowledge. The PI of the current study contends that Orem’s statements of self-care operations are more speculative and broad in their current form. The subthemes of “I can tell” and “making sure” refines and enhances Orem’s (1987/2001) estimative operations. The subtheme of “the wakeup call” refines and enhances Orem’s transitional operations (1987/2001). The essential central and subthemes illustrate productive operational concepts (Orem, 1988/2001). The contribution of the selected current study subthemes to estimative, transitional, and productive operations will be discussed separately.

Estimative operations. The subthemes of “I can tell” and “making sure” (in the subtheme “tending to it”) refines and enhances estimative operations in the theory of self-care (Orem, 1987/2001). The key activities of estimative operations are the investigation of (a) both internal and external conditions and (b) investigation of the meaning of the characterized

conditions (Orem, 2001, p.259). The outcome of estimative operations is knowledge (Orem, 1987/2001). The actions of investigation, assigning meaning, and knowing are perceptual and cognitive processes exercised by the individual. Orem (1987/2001) considered these actions as instrumental in estimative operations but did not develop or explicate these terms theoretically for use in research.

The participants' actions and statements characterized in the essential subthemes "I can tell" and "making sure" are examples of Orem's (1987/2001) investigation, determining meaning, and knowledge in estimative operations. The women were aware of their symptoms, an internal condition. They also were aware of their triggers were external conditions that change their BP. The women were able to interpret their symptoms and triggers as meaning that their BP had changed from normal. Additionally, the women determined that a BP change meant that they may not feel well and live normally. Many participants were able to make these interpretations and determine the meaning based on their knowledge of their bodies. The participants were not directly queried as to "how do you investigate your BP changes". They were queried about "what is happening" and "how can you tell". Their acts of investigation may be embedded in their awareness and their interpretation of their internal and external conditions as BP changes. Some women needed to do further investigation to "make sure" that the symptoms they were experiencing were related to their BP.

In "making sure" (an action in "tending to it"), some women confirmed that their BP was higher than normal through objective BP measurement, taking medicine, and asking the doctor. A couple of participants referenced the need to identify the BP changes with a degree of certainty so that they take the right action and not waste time with ineffective actions. The act to confirm

their BP change by the women may have been driven by their reflection on what they felt and experienced.

The current study themes of “I can tell” and “making sure” enhances Orem’s (1987/2001) estimative operations by identifying components that represent the “investigative” processes in a concrete way. The use of the concepts of awareness, and interpretation to represent investigation can theoretically guide the further study of persons with BP changes and other conditions.

Certainty and uncertainty may be underexplored concepts in estimative operations contributed by the current study. Many women were “very sure” that they knew their BP changed from their symptoms and exposure to triggers. Some women were not always sure they could tell their BP had changed and needed to take further investigative action because of their uncertainty. The most common distressful symptom reported by women in the current study is headaches. The most similar existing research population to the women in the current study is women with migraine headaches, another distressful symptom (Maloney et al., 2006; Rutberg & Ohrling, 2012). Participants in the studies of migraines reported their lives as plagued by uncertainty as their headaches were constantly changing and unpredictable in nature (Moloney et al., 2006; Rutberg & Ohrling, 2012). The women in the qualitative studies found themselves needing to be ready for whatever may happen due to the unpredictability of their headaches (Moloney et al., 2006; Rutberg & Ohrling, 2012). In contrast, many current study participants described knowing and being sure that their BP was up when they experienced their headaches. The headaches of the participants in the current study may be less ambiguous since they knew the precipitating cause. Uncertainty is a condition that exists when an individual cannot “determine the meaning of illness-related events” (Mishel & Clayton, 2008, p.55). The

determination of meaning is an important activity in estimative operations (Orem, 1987/2001). The current study participants may have been better able to determine the meaning of their headaches than the study participants with migraines and avoided or reduced uncertainty. The concepts of uncertainty and certainty may have important roles in how persons assign meaning to their characterized conditions and needs to be described and clarified with further studies.

Transitional operations. The current study subtheme of “the wakeup call” reflects transitional operations (Orem, 2001). Orem (2001) hypothesized that transitional operations is the phase where individuals reflect and “decide what to do with respect to self-care” with the product being a decision to engage in self-care (p.259). In the current study, four women made a decision to take their BP seriously and begin caring for themselves after experiencing a “wakeup call” in the form of a catastrophic health problem. This key decision is consistent with transitional operations as the women made a decision to care for their BP (Orem, 1987/2001). The decision to care for their BP after the wakeup call may have been preceded by reflection on prior choices that were ineffective. This premise is confirmed by two women who reported what they did not do to take care of their BP before their wakeup call. The type of reflection before and after making a decision relative to self-care and receiving a stimulus or impetus to change are not specified in transitional operations (Orem, 1987/2001). The concept of a stimulus or impetus for change may be a new concept in the decision-making process for self-care. Concrete examples of reflection, receipt of a stimulus, and decision making were discovered in the women’s stories that can guide future research. The concepts are relevant to any person with chronic condition requiring self-care and merits further development and description through research.

Productive operations. The central theme of getting to normal and the essential subthemes are consistent with productive operations in the theory of self-care (Orem, 1987/2001). The activities in productive operations include “preparation of the self, materials, and the environment for performance of self-care, monitoring for effects and results, and reflection on the adequacy of results” (Orem, 1987, p. 228). The desired outcome of productive operations is self-care (Orem, 1987/2001). The women desired to maintain a state of getting and their BP normal. The participants’ ongoing self-monitoring of their BP when it was not normal is described in “I can tell”. The women may have been monitoring the effects of their episodic actions in “tending to it”, a premise that is inferred from the stories. Their tending strategies were effective if they got their BP back to normal. Many women prepared themselves to perform self-care of their BP with receipt of the wakeup call. Many women in the study may have also been monitoring the adequacy of their actions in “doing it right”. The monitoring for adequacy of their actions is inferred in this subtheme as a distinction was made between doing it “right” or “wrong”. The women were monitoring themselves and the effects of their actions in many ways. Monitoring is an important concept for self-care but may exist in many forms that were not specified theoretically by Orem (1987/2001). The current study concretely illustrates different types of monitoring that can be used to guide future research.

In summary, the current study makes Orem’s (1987/2001) broad theoretical concepts of estimative, transitional and productive operations more specific with the participants’ examples from the essential central and subthemes. The self-care operational concepts are moved away from the “speculatively practical” and closer to the “practically practical” knowledge domain (Orem, 1988). The outcome of making highly theoretical concepts more specific is increased

usefulness to guide further self-care research of persons with BP changes and/or other chronic illness. The explication of the self-care operational concepts enhances the theory of self-care, an extant nursing theory (Orem, 1987/2001). In turn, the current study contributed substantively to nursing science.

Implications of the Study for Research, Practice, and Public Health

Contributions of the Study to Research

The current study contributes three key implications for future health research. The PI believes that the descriptions of the current study participants' experiences confirm the two untested presumptions forming the study phenomenon (i.e., perceived BP changes are the underlying condition responsible for symptoms and that perceived BP changes guide self-management). The current study contributions for research are (a) the meaning of perceptible BP changes, (b) the use of an elaborate BP self-management process, and (c) BP changes as a potentially disruptive intrusive condition for affected individuals. Each of the implications will be discussed individually.

The meaning of BP changes. Blood pressure changes had important meanings for the women in the current study. There are extant studies of hypertensive symptoms (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2009; San Pedro et al., 2010). These studies quantify the frequency and type of common hypertensive symptoms (e.g., headaches, vision changes, and dizziness). There is a need for further research as to what the symptom(s) "mean" to the individual holder. The meaning and importance of having normal BP is reflected in the central essential theme of "getting to normal". The women in the current study described important meanings about their BP changes for themselves and their daily lives. The participants did not

feel well, could not complete their day-to-day activities, and were fearful about premature death and having catastrophic illnesses with their BP changes. Enough extant research exists that depict the types and frequencies of hypertensive symptoms. The body changes experienced by the women in the current study were congruent with the types of symptoms in the extant research (Chatellier et al., 1982; Kjellgren et al., 1998; Middeke et al., 2008; San Pedro et al., 2010). There is a need for further research regarding the meaning of BP changes for persons with HTN. The current nursing study is a step in the exploration of the meaning(s) of BP changes in a group of women with HTN. The further study of BP changes may be relevant to other health science-related disciplines (e.g., psychology and sociology) with an interest in illness and their meanings. Further studies of the meaning of BP changes are needed with men and a larger, more diverse group of women.

The self-management of BP changes. The women in the current study used an elaborate self-management process in response to their BP changes. The process, depicted by the essential subthemes included perceptual, cognitive, and physical behaviors to self-manage their BP changes. The actions described by the participants in the subtheme “doing it right” are consistent with several quantitative and qualitative research studies of lifestyle modifications and antihypertensive medication known to control BP. The other subthemes have not been extensively studied in extant research. The broad concepts of awareness, knowledge, and episodic BP-directed symptom management are not well developed and their relationship(s) to one another are unknown. The concepts and any associated connections need to be explored and described through further studies. Belief-based interventions, tailored to the individual, to improve BP control may be possible after studies to further develop the current study themes. A

research program of BP-driven symptom management and self-management of HTN, a chronic cardiovascular illness, is consistent with research priorities of the NINR (2011). The NINR supports research that enhances health promotion and disease prevention and improves quality of life by symptom management of acute and chronic illness. The current study is the initial study in a research program that has the potential to improve BP control and manage distressful symptoms.

Distressful, intrusive BP changes. Blood pressure changes have not been extensively described in prior literature as a distressful, intrusive problem. Typically, HTN has been depicted in practice guidelines and healthcare literature as the “silent killer” and as an asymptomatic condition (Moore, 2005; San Pedro et al., 2010; Schoenberg & Drew, 2002). Providers and investigators may not expect BP changes to distress, disturb or even be noticed by people with HTN. Yet, the women in the current study found their BP changes to cause multiple distressful symptoms and intrude into their lifeworlds with impairments to lived space, body, time, and relations. There is a possible explanation for the small amount of research of BP changes as distressful and disruptive to persons with HTN. Most research focuses on HTN as a condition rather than BP changes that uniquely affect individuals. The current study explores HTN as having unique episodic changes with notable consequences. More research is needed to describe BP changes and any negative consequences or outcomes to affected individuals.

In summary, the current study contributes important implications for health research in terms of the meaning of BP changes, self-management, and the confirmation BP changes as distressful and disturbing problems. The current study is an exploration to describe BP changes as a unique characteristic of HTN and explore both self-management and consequential distress

and intrusion. More studies are needed with a diverse group of women and men with HTN to further describe their experiences of BP changes.

Implications of the Study to Practice

The current study contributes four important implications for the clinical care of persons with HTN. Many different types of clinicians are actively involved in the clinical management of persons with HTN (e.g., nurses, nurse practitioners, and physicians). The four implications include (a) recognition of their patients' beliefs about symptomatic BP changes, (b) assessment for perceived BP changes, (c) assessment of patient self-management of BP changes, and (d) the provider-patient encounter. Each implication for clinical management for clinicians will be discussed individually in the following paragraphs.

Recognition of patients' symptomatic BP changes. Clinicians need to recognize that many of their patients with HTN do experience symptomatic BP changes. While all the participants in the current study experienced distressful BP changes, many of them did not talk to their doctors about their hypertensive symptoms. There are two reasons as to why this conversation did not occur between the participants and their clinicians. First, many participants stated that their doctors were in a hurry and only had time to give them prescriptions and not to educate, counsel, or discuss issues of concern. The participants' views about their doctors being hurried are valid as Migongo and colleagues (2012) found the average office visit duration was 14.5 minutes in 1484 office visits. Participants may avoid bringing up issues about their hypertensive symptoms if they believed their physicians did not have time for them. Second, many providers may ascribe to a commonly held biomedical view of HTN as an asymptomatic condition (San Pedro et al., 2010; Schoenberg & Drew, 2002). There is a possibility that

providers simply did not consider asking their patients if they experience hypertensive symptoms. The impetus for initiating a conversation about hypertensive symptoms and perceived BP changes may lie with the clinician. More clinicians need to embrace their patients' viewpoints about their hypertensive symptoms to initiate those important conversations.

Assessment of patient self-management. Clinicians should assess their patients with HTN to determine if and how they are self-managing their BP changes and HTN. The participants in the current study employed self-management strategies that were episodic to “tend” to a BP change as well as doing the “right” things in terms of taking antihypertensive medications and adopting recommended lifestyle change known to control BP as described in JNC 7 (Chobanian et al., 2003). Many African American participants incorporated home remedies such as eating garlic, apple cider vinegar, and drinking bitter melon tea to self-manage their BP. Providers could adopt a two question approach to assess their patients with HTN. The first question may be “what do you do when you feel that your BP is up” in response to a patient report of a BP change. The second question with usefulness for providers is to ask their patients “what do you do to take care of your BP”. The PI found that the study participants were employing two sets of actions to get their BP down acutely and episodically and on a day-to day basis. These questions become particularly important for providers to discover reasons as why their patients with HTN are not achieving desired goal BP levels of less than 140/90 mm Hg. Presently, nearly one-third of American adults have a diagnosis of HTN, but only 52.5% of those adults have a BP at the desired target level (Go et al., 2013). Clinicians may uncover reasons as to why their patients with HTN are not at goal levels by assessing the “what” and the “how” of patient BP self-management.

In summary, the questions that the PI used in her interviews may facilitate the assessment of patient self-management of both BP changes and HTN. Further research is needed to demonstrate the usefulness of the interview questions to assess self-management in a diverse group of men and women with BP changes and HTN. The eventual product of this type of research may be an assessment guide with validated questions to help busy clinicians optimize their encounters with their patients with HTN.

Contributions of the Study to Public Health

The knowledge of how a group of women self-managed their BP changes has the potential to impact the health of women with HTN. In the U.S., nearly one-third of all women over the age of 20 have HTN (Go et al., 2013). Of those women, 56.8% of European Americans and 52.7% of African Americans have controlled BP to less than 140/90 mm Hg (Go et al., 2013). Uncontrolled HTN is a major health problem with an association to more than 70% of first time occurrences of catastrophic cardiovascular diseases (e.g., stroke, heart failure, and MI) (Lloyd-Jones et al., 2010). Women have a slightly higher mortality rate (51%) from those cardiovascular diseases compared to men (49%) (Go et al., 2013). There is an urgent need to increase the percentage of women who have controlled BP to reduce the death and disability from catastrophic cardiovascular disease. One reason that women may not be at their goal BP is that they are caring for themselves in ways that are not completely known to or understood by clinicians, investigators, and public health officials. The women in this study managed their BP during symptom-driven episodic changes and on a day-to-day basis. The study is one example of how women self-manage their BP. More research is needed to describe the possible ways women

may be managing their BP. When the ways of how women manage their BP are better understood, interventions can be devised with the potential to improve BP control.

Limitations and Strengths of the Study

The limitations and strengths of any research study must be recognized and acknowledged while considering the merits of the study and applicability of results. The study limitations focus on the PI as an investigator/research instrument and the sample of women participating in the study. The study strengths include the use of van Manen's (1990) methodology and method and steps to assure trustworthiness. Study limitations and strengths will be discussed separately.

Limitations: The PI. Investigators are viewed by van Manen (1990) as co-participants in the research process. The PI is a novice qualitative investigator with a strong quantitative orientation. She has extensive theoretical immersion in Orem's (2001) self-care theories and Leventhal and colleagues' (2003) common sense model for illness (2003). She acknowledged her biases in a self-reflective journal that she kept after each interview and triggered after clinical encounters with patients with hypertensive symptoms.

The PI is an experienced nurse practitioner accustomed to interviewing patients on tight timelines. The early interviews were the most challenging as the PI had to learn to talk less and listen more to let the participants' stories follow their own trajectory. The PI's interview transcripts were reviewed throughout the data collection process by an experienced qualitative investigator to assure the PI was letting the participants tell their stories in their own way.

Limitations: Participants. The participants were primarily recruited from the Wayne State Campus and the Gary Burnstein clinic in Pontiac, MI. The sample was a group of relatively

well-educated women with varying economic status. Many of the women had no insurance and limited access to healthcare. The structure of the experience of self-managing perceived BP changes reflected the characteristics and background of the sample. Their experiences may differ from women from different racial, educational, and economic backgrounds. Their experiences may also differ from individuals who did not volunteer for the study and from men.

Strengths: van Manen's methodology and method. van Manen's (1990) methodology and method were used to conduct this inquiry. The use of thematic and guided existential reflection of the textual descriptions allowed the PI to depict the experiences of women in a deep and comprehensive manner. The contribution of the current study to the lived experience of persons with HTN and perceived BP changes was made possible by van Manen's (1990) methodology and method.

Strengths: Assuring trustworthiness. Many steps were built into the protocol and followed to assure study trustworthiness (credibility, transferability, dependability, confirmability) (Lincoln & Guba, 1985). The steps to assure trustworthiness will be described individually.

Credibility. The PI assured credibility through meetings with her qualitative advisor, consensual validation, and confirmation of the confirmed themes with a second investigator. The PI also validated the essential themes with one European American woman and one African American woman who had the experience of perceived BP changes but did not participate in the study. The women concurred with the essential themes as credibly representative of their experience.

Transferability and dependability. Transferability was demonstrated by the PI through thick descriptions from the textual data to support each essential theme. Dependability was demonstrated by the use of a semi-structured interview guide and digital taping of the interviews. The interviews transcripts were verified against the original recordings for accuracy by the PI.

Confirmability. Confirmability was demonstrated by the consensual validation of study themes by a second independent investigator to confirm that the essential themes represented the participants' and not the PI's views. The PI also kept transcripts, field notes, and coding session notes in NVivo 10 to store the audit trail. The PI stored the digital recordings on a secure, password-protected drive at Wayne State University with the permission of the IRB. In summary, the PI acknowledges both the strengths and limitations of the current study. Several steps were incorporated in the protocol to assure trustworthiness. The PI's interviewing and conduct of the study was supervised by her research mentors.

Summary

In summary, women living with hypertension *can tell* when their blood pressure is not normal; they *tend to it* but sometimes it takes a *wakeup call* to get them to *do the right things* all in an effort to *get to normal*. This study contributed new knowledge about HTN in three ways. First, study participants experienced BP changes that represented a change in their usual baseline HTN. Perceptible BP changes are unique and distinct from HTN as described by the women in the study. Second, perceived BP changes were guides to self-management. Participants employed a process of actions that included both episodic BP-driven symptom management and daily BP behaviors to get their BP down to normal. Third, elevated BP changes were characterized as intrusive and disruptive to the lifeworlds of the study participants. The

description of the structure of the participants' experiences though the essential central theme and subthemes and disruption to their lifeworlds were facilitated through the use of van Manen's (1990) phenomenology and method.

The results of the current study have important implications for research, and clinical practice. For future research, the current study was an exploratory study to describe perceived BP changes, their self-management, and the disruption and intrusion of perceived BP changes to the lifeworlds of the women in the study. More research is clearly needed in each of these areas to build more knowledge on the foundation from the current study. The current study used a series of questions that may be useful for providers to assess their patients with HTN relative to perceived BP changes, and self-management. Many patients with HTN may experience perceived BP changes and employ an action sequence to get and keep their BP down. Providers have a unique opportunity to impact BP control and limit death and disability by changing how they assess their patients with HTN. Investigators can contribute new knowledge through the further study of perceived BP changes and their self-management. There is also a need to better understand how perceived BP changes are intrusive and disruptive to persons with HTN.

APPENDIX A: DATA COLLECTION INFORMATION

Self-Managing Perceived Blood Pressure Study

Demographic Data Collection Sheet

Date of interview _____

Participant self-selected name _____

Age (in years) _____

Number of years living with HTN _____

Highest grade in school completed _____

Taking antihypertensive medication: Yes No

Were you born in the United States? Yes No

Have you lived in the United States for most of your adult life? Yes No

Are you or could you be pregnant? Yes No

Comorbid Conditions (check yes to all applicable):

- Heart failure
- MI
- Other heart problem
- Stroke
- Vascular
- Lung
- Kidney
- Diabetes
- Eye
- Mental health problem (depression, schizophrenia, bipolar disorder)
- Other health problem _____

Annual Income (check one):

- Less than \$1000
- \$1000 to \$4999
- \$ 5000 to \$ 9999
- \$10,000 to \$ 14,999

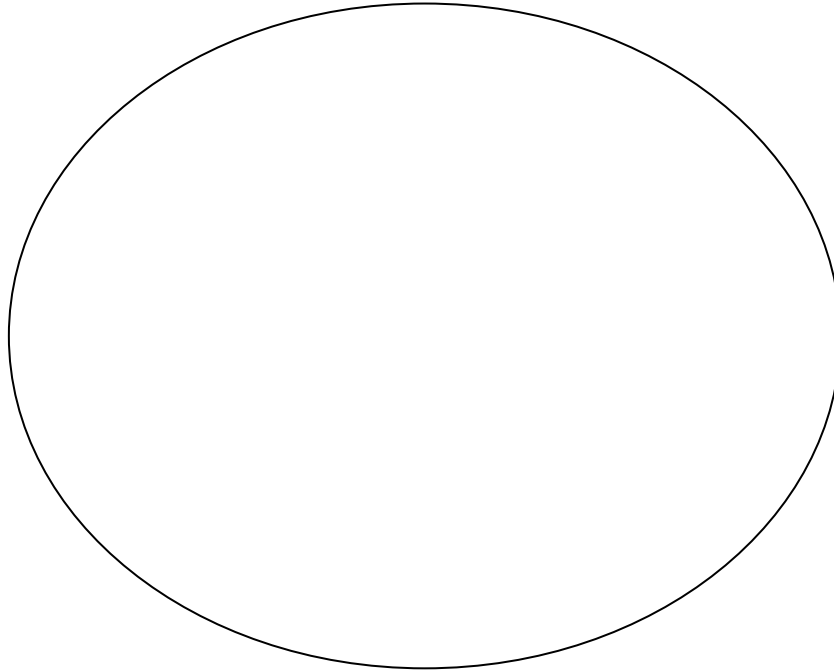
- \$ 15,000 to \$24,999
- \$25,000 to \$ 49,999
- \$ 50,000 or more
- Prefer not to answer

Mini-Cog Assessment

1. Listen to the following three words carefully and repeat them back to me:

APPLE WATCH PENNY

2. Draw the hours of the clock inside the circle and place the hands of the clock to represent the time “forty five minutes past ten o’clock”.



3. Repeat the three words I just gave you

Mini-Cog Scoring

1. Number of correct items recalled_____ [if 3 then negative screen. STOP]
2. If answer is 1-2 correct items recalled:

If CDT normal, Mini-Cog negative for cognitive impairment, proceed with interview.

If CDT abnormal, Mini-Cog positive for cognitive impairment, exclude participant.

APPENDIX B: SEMI-STRUCTURED INTERVIEW GUIDE

Interview Guide for Self-Managing Perceived Blood Pressure Changes

Participant Self-Selected Name _____

Date: _____

Thank you very much for agreeing to meet with me today to talk about your blood pressure. I would like to let you know about a few things before we get started.

- This interview will be tape recorded and transcribed by a professional transcriptionist.
- You will only be identified on tape and in research transcripts and documents by the name you select for yourself.
- You do not have to answer any question you do not want to answer.
- You can stop the interview at any time.
- Sometimes, talking about thoughts, feelings, and experiences can be upsetting or distressful. You may stop the interview at any time if you become upset or distressed.

Do you have any questions before we get started?

Question 1: Describe what it is like living with high blood pressure?	Notes
<p>Prompts:</p> <ul style="list-style-type: none"> • Tell me more about that <p><u>Perceived Blood Pressure Changes</u> Remember when I asked if you can tell that your blood changes by what you feel.</p> <p>Question 2: What is happening to you when you feel (insert symptom/sensation here)?</p> <p>Prompt:</p> <ul style="list-style-type: none"> • How do you know the (insert symptom/sensation here) that you felt is due to your blood pressure and not something else? • What does it mean when you felt (insert symptom/sensation here)? <p><u>Self-Management of Perceived Blood Pressure Changes</u></p> <p>Question 3: When you feel (insert symptom/sensation here), what do you do about it?</p> <p>Prompts:</p>	

- Tell me more about that
- Describe why you did that
- Have you ever talked to your doctor about your
(insert symptom/sensation here)?

Additional Notes:

APPENDIX C: RECRUITMENT FLYER

Volunteers Needed

WHO: African American or Caucasian women

- Who are between the ages of 18 to 65
- Have high blood pressure for at least two years
- Believe they can tell that their blood pressure changes based on what they feel or have symptoms due to their high blood pressure.

WHAT: Participate in a Wayne State University nursing research study of the experiences of women living with high blood pressure

WHY: To describe the experiences of women living with high blood pressure and hypertensive symptoms.

HOW: Participate in one interview to answer questions about your experiences about your high blood pressure and how you care for yourself. Your interview may last approximately 60 to 90 minutes.

COST: There is no cost or obligation to you.

INTERESTED or HAVE QUESTIONS

Mary Franklin, RN, MSN, ACNP-BC (Principal Investigator)
 Doctoral Student
 (248)-622-0144
 MFranklin@wayne.edu

Compensation for your time will be available.

APPROVAL PERIOD

MAY 21 '12

MAR 29 '13

WAYNE STATE UNIVERSITY
 INSTITUTIONAL REVIEW BOARD

APPENDIX D: PIPELINE ANNOUNCEMENT**Pipeline Announcement**

Header: Women needed for a study about living with high blood pressure

Body: African American and Caucasian women who have had high blood pressure for at least two years and are between the ages of 18 to 65 are needed for a research study about living with high blood pressure. Interested persons must take blood pressure medicine and believe that they can tell that their blood pressure changes according to what they feel or by their symptoms. Eligible participants will complete one 60 to 90 minute interview to be conducted at the College of Nursing.

For more information or questions, please call:

**Mary Franklin, RN, MSN, ACNP-BC (Principal Investigator)
Doctoral Student
Wayne State University College of Nursing
(248)-622-0144**

APPROVAL PERIOD

MAY 21 '12

MAR 29 '13

**WAYNE STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD**

APPENDIX E: INFORMATION SHEET

The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension

Research Information Sheet

Title of Study: The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension

Principal Investigator (PI): Mary M. Franklin, RN, MSN, ACNP-BC
Wayne State University College of Nursing
(248)-622-0144

Purpose:

You are being asked to be in a research study of what women believe about their blood pressure because you are an African or European American woman between the ages of 18 to 65 who believes that you can tell that your blood pressure changes by what you feel. This study is being conducted at Wayne State University.

Study Procedures:

If you take part in the study, you will be asked to

- Participate in one 60 to 90 minute interview with the PI in a private room in the College of Nursing.
- Select a name for yourself that will be used to identify you and your answers in all research recordings and transcripts.
- Answer some general questions about your age, years living with high blood pressure, health, education, and socioeconomic status.
- Answer some questions about your experiences living with high blood pressure, how you can tell that your blood pressure changes, and how you take care of your blood pressure.
- Explain or give more details and/or descriptions in your answers.
 - a. You can refuse to answer any question or any part of any question at any time.
 - b. You can stop your participation in the study at any time.
- Allow your answers to be digitally recorded and professionally transcribed. The only persons who will review your answers are the PI, her research supervisors, and the professional transcriptionist.
- Permit your recorded and transcribed answers to be stored in a safe accessible only to the PI.
- Permit your answers to be analyzed on a password-protected laptop accessible only by the PI.

Benefits

- As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks

By taking part in this study, you may experience the following risks:

- You may become fatigued during the interview. You may stop the interview at any time.
- You may become upset talking about your experiences and feelings about your blood pressure. You can refuse to answer any question that is upsetting to you at any time and/or stop the interview at any time.
- You may experience your blood pressure symptoms at the time of the interview. You may stop the interview if you are not feeling well. You should call your primary care provider without delay. The PI can provide you with additional resources if you do not have a primary care provider.

Submission/Revision Date: 05/16/12
Protocol Version #: 2

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HIC Date: 5/08

The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension

- You will be answering questions about your personal experiences. The PI will protect your privacy by conducting the interviews in a private place. She will limit who has access to your answers to the professional transcriptionist and her research supervisors.

Costs

- There will be no costs to you for participation in this research study.

Compensation

- For taking part in this research study, you will be paid for your time and inconvenience with one \$25.00 Meijer gift card at the completion of the interview.

Confidentiality:

- All information collected about you during the course of this study will be kept without any identifiers.
- You will be identified in the research records by a name that you choose for yourself. There will be no list that links your identity with this name.
- The transcribed answers and digital recordings will be confidentially destroyed one year after the completion of the study.

Voluntary Participation /Withdrawal:

Taking part in this study is voluntary. You are free not to answer any questions and to withdraw from the interview at any time. Your decision will not change any present or future relationship with Wayne State University.

Questions:

If you have any questions about this study now or in the future, you may contact Mary Franklin, RN, MSN, ACNP-BC (the PI) at the following phone number, (248)-622-0144. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:

By completing the interview, you are agreeing to participate in this study.

Submission/Revision Date: 05/16/12
Protocol Version #: 2

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APPROVAL PERIOD

MAY 21 '12

MAR 29 '13

WAYNE STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

HIC Date: 5/08

APPENDIX F: INSTITUTIONAL REVIEW BOARD APPROVAL

**WAYNE STATE
UNIVERSITY**

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
<http://irb.wayne.edu>

NOTICE OF EXPEDITED APPROVAL

To: Mary Franklin
Adult Health/Administration
5557 Cass

From: Dr. Scott Millis *S. Millis*
Chairperson, Behavioral Institutional Review Board (B3)

Date: March 30, 2012

RE: IRB #: 0210412B3E
Protocol Title: The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension
Funding Source: Sponsor: SIGMA THETA TAU INTERNATIONAL, INCORPORATED
Protocol #: 1203010673

Expiration Date: March 29, 2013

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review* Category (#6)* by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 03/30/2012 through 03/29/2013. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (received in the IRB Office 03/27/2012)
- Protocol (received in the IRB Office 03/27/2012)
- Receipt of letter of support from WSU Dean of Students (dated 03/27/2012)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) The only record linking the participant and the research would be the consent document, (ii) the principal risk would be potential harm resulting from a breach of confidentiality, (iii) each participant will be asked whether he or she wants documentation linking the participant with the research, and the participant's wishes will govern, (iv) the consent process is appropriate, (v) when used requested by the participants consent documentation will be appropriate, (vi) the research is not subject to FDA regulations, and (vii) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants not requesting documentation of consent.
- Research Information Sheet (dated 03/21/2012)
- Study Flyer
- Pipeline Announcement
- Data collection tools: Demographic Questions and Mini-Cog Cognitive Screener and Interview Guide

-
- Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.
 - All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
 - Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (<http://www.irb.wayne.edu/policies-human-research.php>).

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NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Mary Franklin
Adult Health/Administration
5557 Cass

From: Dr. Scott Millis *S. Millis*
Chairperson, Behavioral Institutional Review Board (B3)

Date: May 21, 2012

RE: IRB #: 0210412B3E

Protocol Title: The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension

Funding Source: Sponsor: SIGMA THETA TAU INTERNATIONAL, INCORPORATED

Protocol #: 1203010673

Expiration Date: March 29, 2013

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Advertisement - Pipeline Announcement revised to include new phone number.
- Flyer - Study flyer revised to include new phone number.
- Information Sheet (dated 05/16/2012) - Research Information Sheet revised to include new phone number.

**WAYNE STATE
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NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Mary Franklin
Adult Health/Administration
5557 Cass

From: Dr. Scott Millis *S. Millis, PhD*
Chairperson, Behavioral Institutional Review Board (B3)

Date: June 29, 2012

RE: IRB #: 0210412B3E

Protocol Title: The Experiences of Self-Managing Perceived Blood Pressure Changes in Women with Hypertension

Funding Source: Sponsor: SIGMA THETA TAU INTERNATIONAL, INCORPORATED

Protocol #: 1203010673

Expiration Date: March 29, 2013

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Protocol – Addition of Gary Burnstein Community Health Clinic (letter of support dated 6/21/12) and Dr. John Flack's Clinic at DMC (letter of support dated 6/19/12) as study sites. Other changes include posting currently approved recruitment flyers in public places (e.g., churches, stores, etc.) near WSU's campus. These changes do not affect risks to participants.

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ABSTRACT**THE EXPERIENCES OF SELF-MANAGING PERCEIVED BLOOD PRESSURE
CHANGES IN WOMEN WITH HYPERTENSION**

by

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Advisor: Rosalind M. Peters, PhD, RN, FAAN**Major:** Nursing**Degree:** Doctor of Philosophy

In the United States, nearly one-third of all women over the age of 20 have hypertension (HTN). Nearly 30 to 50% of persons with HTN experience symptoms attributed to high blood pressure (BP). Women with hypertensive symptoms may connect their symptoms to perceived BP changes, and may be using their perceptions about BP changes to guide their HTN self-management. There is limited research about perceived BP changes or their use in self-management.

The purpose of this qualitative study was to describe the experiences of women with HTN self-managing their perceived BP changes. van Manen's phenomenology methodology and method guided the inquiry, and also guided the existential reflection of the impact of perceived BP changes on the participants' lifeworlds (e.g., lived space, lived body, lived time, and lived relations).

Seven African American and six European American women with HTN who were able to tell if their BP changed based on their symptoms were recruited from community settings and

were interviewed once with a semi-structured guide. Participants were middle-aged ($M=50.5$ years, $SD=9.62$), experienced in living with HTN ($M=10.76$ years, $SD=9.50$), had at least a high school education, and a limited annual income (93% < than \$24,000). Interviews were digitally recorded and professionally transcribed. Textual data was analyzed using thematic analysis to identify major themes.

Participants experienced distressful BP changes indicated by body changes and sensations (e.g., headaches, visual disturbances, flushing, and fatigue). One central theme (“getting to normal”) and four subthemes (i.e., “I can tell”, “tending to it”, “the wakeup call”, and “doing it right”) were discovered in the data. The themes depict a process of episodic symptom-driven and day-to-day actions that the participants used to return their BP to normal.

The study is significant as new knowledge was discovered about how women perceive their BP changes and use them to guide self-management. This knowledge builds nursing science by explicating the concept of self-care operations within the theory of self-care, and contributes to clinical practice through suggestions for improving patient assessments. Results serve as a foundation for further research of the self-management of BP changes and the development of belief-based interventions with the potential to improve BP control.

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