LEVEL OF SELF-CARE AND SELF-EFFICACY AMONG HYPERTENSION PATIENT IN MEDICAL WARDS AT HOSPITAL UNIVERSITI SAINS MALAYSIA

By

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ABSTRACT

Self-care among hypertension patient was crucial in managing aspects of their health by adopting skills and behavior that prevent disease, limit illness and restore health in future. Self-care and self-efficacy in hypertension were important part in management of hypertension. This study was to determine level of self-care and self-efficacy among hypertension patient in medical ward at Hospital USM. A cross-sectional study on self-care activities among hypertension patients was carried out at medical ward in Hospital USM. This study involved subjects from medical wards which were 7 Utara and 7 Selatan. A total of 105 subjects completed the questionnaires by convenience sampling technique that the fits inclusion criteria. Data was statistically analyzed using the software package SPSS version 22. Among 105 respondents (n=105), 87.6% respondents reported being adherent to hypertension medication, 43.8% low salt dietary, 46.7% engaged in physical activity, 88.6% smoking cessation, 57.1% followed good weight management. Respondents were high in good self-efficacy to manage hypertension which was 60%. Meanwhile for poor self-efficacy were 40%. By the logistic regression, sociodemographic was associated with self-care. Age, gender were significant associated with medication adherence (p-value<0.05). Age was significant associated with low salt diet (p-value<0.05). Gender was significant associated with nonsmoking and weight management (p-value<0.05). For self-efficacy, there were only nonsmoking was associated while the other are not statistically associated to self-care. In conclusion, this research finding indicated there was patient had better adherence to self-care in hypertension in medical ward at Hospital USM. Self-care such as medication adherence, nonsmoking and weight management were common in their daily life in managing hypertension. Better self-care can prevent complication of hypertension which can cause reduce quality of life and mortality.

TAHAP PENJAGAAN DIRI DAN KEBERKESANAN DIRI DALAM KALANGAN PESAKIT HIPERTENSI DALAM WAD PERUBATAN DI HOSPITAL UNIVERSITI SAINS MALAYSIA

ABSTRAK

Penjagaan diri dalam kalangan pesakit tekanan darah tinggi adalah perlu dalam menguruskan aspek kesihatan dengan mengamalkan kemahiran dan tingkah laku untuk mencegah penyakit, mengehadkan penyakit dan memulihkan kesihatan pada masa akan datang. Penjagaan diri dan keberkesanan diri dalam darah tinggi adalah perkara penting dalam pengurusan tekanan darah tinggi. Kajian ini untuk menentukan tahap penjagaan diri dan keberkesanan diri dalam kalangan pesakit hipertensi dalam wad perubatan di Hospital USM. Satu kajian keratan rentas kepada aktiviti penjagaan diri di kalangan pesakit tekanan darah tinggi telah dijalankan di wad perubatan di Hospital USM. Kajian ini melibatkan subjek dari wad perubatan iaitu wad 7 Utara dan 7 Selatan. Seramai 105 subjek mengisi borang soal selidik dengan teknik persampelan mudah yang memenuhi kriteria kemasukan. Data telah dianalisis menggunakan pakej perisian SPSS versi 22. Antara 105 responden (n=105), 87.6% responden melaporkan menjadi pengikut kepada protokol ubat tekanan darah tinggi. 43.8% diet rendah garam yang baik, 46.7% terlibat dalam aktiviti fizikal, 88.6% bebas merokok, 57.1% mengikuti kadar pengurusan berat badan yang baik. Responden mempunyai keberkesanan diri yang baik untuk menguruskan tekanan darah tinggi iaitu seramai 60%. Sementara itu, bagi keberkesanan diri yang lemah adalah 40%. Dengan 'logistik regression', sosiodemografik data dikaitkan dengan penjagaan diri. Umur dan jantina adalah signifikan dengan pematuhan ubatan (nilai $p<0.05$). Umur adalah signifikan dengan diet rendah garam (nilai $p<0.05$). Jantina adalah signifikan dengan tidak merokok dan pengurusan berat (nilai $p<0.05$). Keberkesanan diri didapati hanya signifikan dengan tidak merokok (nilai $p<0.05$).Kesimpulannya, dapatan kajian ini menunjukkan terdapat pesakit yang mematuhi penjagaan diri dalam tekanan darah tinggi di wad perubatan di Hospital USM. Penjagaan diri seperti pematuhan ubat, bebas merokok dan berat pengurusan adalah yang biasa dipraktiskan dalam kehidupan harian dalam menguruskan tekanan darah tinggi. Penjagaan diri yang baik boleh mencegah komplikasi tekanan darah tinggi yang boleh menyebabkan mengurangkan kualiti hidup dan kematian.

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LIST OF ABBREVIATIONS

BP	-	Blood Pressure
CVD	-	Cardiovascular diseases
Hospital USM	-	Hospital Universiti Sains Malaysia
HPT	-	Hypertension
JNC	-	Joint National Committee
NHMS	-	National Health and Morbidity Survey
WHO	-	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Hypertension is the most widely prevalent, largely preventable risk factor for cardiovascular diseases (CVD) accounting for half of deaths due to ischaemic heart disease and stroke (Alam et al. 2014). Hypertension is an important public health problem and its prevalence increases with age (Kiau, Med & Kaur, 2013). According to a report from the World Health Organization (WHO), there was an estimated 972 million people with hypertension in the year 2000; 65% lived in developing world with the number predicted to grow to 1.5 billion by 2025. Besides being a leading cause of cardiovascular disease, hypertension is a common health problem among people all around the world.

A study showed that HPT is a major health problem among Arab Americans and highlight the urgent need to develop public health strategies for prevention and treatment of HPT (Ayman Tailakh, 2013). According to Zhao et al., (2012), hypertension will be reduced if effective measures such as dietary and lifestyle modification, pharmacologic therapy and population-based health education are well-practice among population.

Normal blood pressure is below 120/80 mmHg. When blood pressure is elevated or be hypertension that individual should take some action to mitigate the rising blood pressure, thus preventing potential end-organ damage, including myocardial infarction, kidney failure and cerebrovascular stroke (Chockalingam, 2008). Within uncontrolled blood pressure, hypertension also causes cardiac failure, dementia, renal failure and blindness.

Hypertension happens to people according to the stage of high blood pressure. The stage of hypertension as pre hypertension is systolic pressure that's between 120 to 139 or diastolic pressure between 80 and 89. For stage 1 hypertension is systolic pressure between 140 to 159 or diastolic pressure between 90 and 99. Then for stage 2 hypertension is systolic pressure higher than 160 or diastolic pressure of 100 or higher. The classification of Blood Pressure (BP) as shown in Table 1.1.

Table 1.1 Classification of blood pressure (BP)

Category	Systolic BP mmHg		Diastolic BP mmHg
Normal	<120	and	<80
Prehypertension	120–139	or	80–89
Hypertension, Stage 1	140–159	or	90–99
Hypertension, Stage 2	≥160	or	≥100

Source: JNC 7 Report on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure

The prevalence of hypertension is high in Malaysia. In the third National Health and Morbidity Survey (NHMS III) conducted in 2006, the prevalence of hypertension is increase to 32.7 % in 2011 (See figure 1.1). The prevalence of hypertension amongst adults aged 30 years and above has increased 42.6% in 2006 to 43.5% in 2011 (Gurpreet et al., 2012).

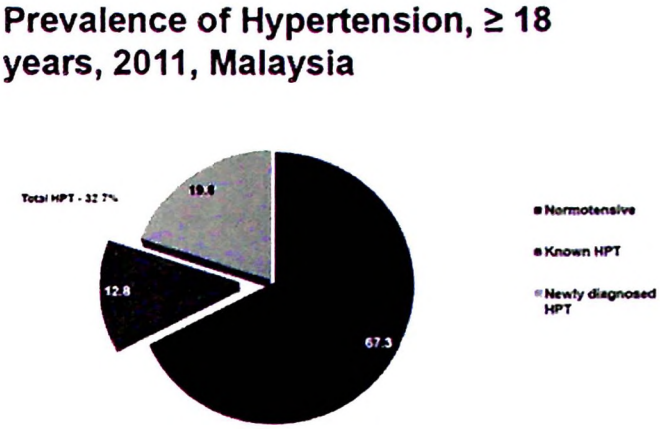

Figure 1.1 Prevalence of hypertension in 2011

Furthermore, blood pressure should be monitored in order to know the blood pressure is in control or not and to take necessary action when hypertension has been identified. Poor control of blood pressure is the greatest cause of increasing morbidity and mortality of people with hypertension (Bosworth et al., 2007). That is important in manage hypertension for preventing serious complications of uncontrolled hypertension. Management and control of hypertension is essential for the overall reduction of cardiovascular morbidity and mortality (Kiau, Med & Kaur, 2013).

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) had identified a number of causal factors for hypertension, including: reduced physical activity, excess body weight, excess dietary sodium intake, inadequate intake of fruits and vegetables, and excessive alcohol intake (Chobanian et al., 2003). These causal factors can be mitigated through self-care strategies for lifestyle modification. According to previous evidence, life style modification is a promising tool for prevention and control of hypertension (Chobanian et al., 2003).

There way to control their blood pressure is assessment of hypertension self-care which can identify the level of self-care. Self-care is an intentional action that individuals, family members and the community should engage in to maintain good health. They also have ability to perform self-care varies according to many social determinants and health conditions (World Health Organization, 2009).

This self-care also include in process of maintaining health through positive health practices, and managing illness and disease. It also to attain good health, several efforts need to be made. This includes maintaining good health by taking health action or performing proper self-care. According to Cameron et al. (2012) self-care is the process of engaging individuals to take full responsibility of managing aspects of their health by adopting skills and behavior that prevent disease, limit illness and restore health.

These may include improving their self-care that include, increased physical activity, weight reduction, and reduced sodium intake, and adherence with the prescribed medication (Ali & Taha, 2014). Current clinical policy, based on the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7), recommends that people with hypertension engage in six self-care activities: adhering to antihypertensive medication regimens, maintaining or losing weight, following a low-salt diet, limiting alcohol, engaging in regular physical activity, and eliminating tobacco use.

The Dietary Approaches to Stop Hypertension diet better known as the DASH diet is a healthy eating plan that has been proven by studies that reduce blood pressure and cholesterol. The DASH diet is grounded on healthy eating principles that in addition to lowering blood pressure are associated with the lower risk of heart disease, stroke and

cancer. Besides it can support reaching and maintaining a healthy weight. The 2010 Dietary Guidelines for Malaysians is the latest evidence based nutrition and physical activity recommendation for the Malaysians. There are states that to choose and prepare foods with less salt and sauces. The recommendation is to limit salt intake to one teaspoon a day and reduce the consumption of highly salted foods and condiments (Ministry of Health, 2011).

Previous studies showed that adherence to the "Dietary Approaches to Stop Hypertension (DASH) diet" alone can reduce both systolic and diastolic blood pressure (Appel et al., 2006). Management of hypertension which are including a diet rich in fruits and vegetables, cessation of smoking, sufficient physical activity, antihypertensive medication, reduction in weight, saturated and total fat, and sodium, and moderate alcohol consumption. (Chobanian et al., 2003). Research on hypertension self-care is vital, given that it can provide information for developing policies on support for self-care, suggest what practical action can be taken, and provide ideas on how to support self-care (Hu, Li, & Arao, 2013).

According to Pharmacy of National Healthcare, high blood pressure is a lifelong disease. It can be controlled but not cured. You can help your blood pressure control by eating sensibly, reducing your salt and fat intake, reducing your calorie and sugar intake, reducing your alcohol intake, exercising regularly and losing weight, stop smoking, keeping stress under control, taking your medicines regularly, keeping up with your doctor's appointment, monitoring your blood pressure regularly.

In my study, I include the self-care in hypertension only a few which is in taking medication, following a low-salt diet, engaging in physical activity, avoiding tobacco smoke, using strategies to maintain or lose weight, and reducing alcohol consumption but I do not ask about the alcohol consumption due to cultural sensitivity.

Patients with hypertension are expected to be able to keep care about them and make changes in their lifestyle. The increasing prevalence of hypertension is attributed to population growth, ageing and behavioral risk factors, such as unhealthy diet, harmful use of alcohol, lack of physical activity, excess weight and exposure to persistent stress. Thus, World Health Organization (2013) reported low socioeconomic status and poor access to health services and medications also increase the vulnerability of developing major cardiovascular events due to uncontrolled hypertension.

There are some personal factors and health-related factors that are affects in the level of patient self-care of hypertension. These are age, gender, marital status, level of education, family income and duration of hypertension and self-efficacy control of hypertension. One of factor in self-care of hypertension is age. The younger the age the raising self-care they are in hypertension. For gender, there is male and female in performing self-care in managing hypertension.

In a study, Zhao et al. (2008) found that among all racial/ethnic groups including White, Black, American Indian/Alaska native, and Hispanic women, Asian women with hypertension had the lowest percentage of adopting four healthy lifestyle behaviors including physical activity, fruit and vegetable consumption, weight control, and alcohol consumption. Duration of hypertension also can affect the self-care in managing hypertension, this due to the awareness of patient in controlling their rising of blood

pressure. In hypertension control self-efficacy, this important in managing of the hypertension.

Social Cognitive Theory (Bandura, 1986) used for understanding an individual's self-care behaviors. However in this study, researcher examined sociodemographic data and self-efficacy of hypertension with hypertension self-care activities, including medication-taking, exercise, diet, and weight control.

1.2 Problem of Statement

The aim of the study is to determine self-care and identify factors associated with self-care among patient with hypertension in medical ward in Hospital USM. The prevalence of hypertension was 32.0% and only 26.0% of those on hypertension medication had BP control (Hu et al., 2013). A study also had been demonstrated and resulted rates of self-care engagement among hypertensive adults were relatively low (Ndumele, Shaykevich, Williams & Hicks, 2010). Self-care of patient with hypertension was less in controlling blood pressure. Within hypertension self-care guidelines, many patients with hypertension do not comply with the suggested recommendations and, as a result, often fail to control their blood pressure (Lee et al., 2010).

This was important for patient in order to control the hypertension with managements such as a diet rich in fruits and vegetables, cessation of smoking, sufficient physical activity, antihypertensive medication, reduction in weight, saturated and total fat, and sodium consumption. In addition, self-care was related to awareness in managing hypertension or not. Practice of the self-care behaviors necessary to prevent complication and control high blood pressure. Hence, there also only a few studies that have been done related to self-care in managing hypertension.

The role of nursing in preventing hypertension crises and complications is to create awareness, hence, its significant reduction of patient with hypertension (Ali & Taha, 2014). Thus many patients with hypertension did not comply with the suggested recommendations self-care in hypertension and, as a result, often fail to control their BP. Then, patients need to be emphasized in their self-care in managing their hypertension. There are increasing in admission of patient with uncontrolled hypertension at Hospital USM. This is proven their blood pressure is high during their hospitalization. This is due to their less awareness and practice of self-care such as medication taking as prescribed and diet intake. These study will be identified patient levels of their self-care in manage hypertension.

1.3 Research Objectives

1.3.1 General Objective

To determine level of self-care and self-efficacy among hypertension patient in medical ward at Hospital Universiti Sains Malaysia

1.3.2 Specific Objectives

1. To determine level of self-care among hypertension patient in medical ward at Hospital Universiti Sains Malaysia

2. To determine the self-efficacy among hypertension patient in medical ward at Hospital Universiti Sains Malaysia

3. To identify the factors associated with level of self-care among hypertension patient in medical ward at Hospital Universiti Sains Malaysia

1.4 Research Questions

1. What is level of self-care among hypertension patient in medical wards at Hospital Universiti Sains Malaysia?

2. What is the self-efficacy in managing hypertension among hypertension patient in medical ward at Hospital Universiti Sains Malaysia?

3. What are the factors associated with level of self-care among hypertension patient in medical ward at Hospital Universiti Sains Malaysia?

1.5 Research Hypotheses

Hypothesis 1:

H_A : There is a significant association between selected sosiodemographic data (age, gender, level of education, duration of hypertension) and self-care among hypertension patient in medical ward at Hospital USM.

H_O : There is no significant association between selected sosiodemographic data (age, gender, level of education, duration of hypertension) and self-care among hypertension patient in medical ward at Hospital USM.

Hypothesis 2:

H_A : There is a significant association between self-efficacy control of hypertension and self-care level among hypertension patient in medical ward at Hospital USM.

H_O : There is no significant association between self-efficacy control of hypertension and self-care level among hypertension patient in medical ward at Hospital USM.

1.6 Definition of Terms (Conceptual)

1.6.1 Self-Care

Self-care is defined as a naturalistic decision-making process that patients use in the choice of behaviors that maintain physiological stability (symptom monitoring and treatment adherence) and the response to symptoms when they occur (Riegel & Moser et al., 2009). Self-care also means care for oneself or self-treatment in keeping self-healthy or better. In simple word, self-care is what people do for individual to establish and maintain health, prevent and deal with illness.

World Health Organization (2015) explain the concept of self-care which included hygiene (general and personal); nutrition (type and quality of food eaten); lifestyle (sporting activities, leisure etc.); environmental factors (living conditions, social habits, etc.); socioeconomic factors (income level, cultural beliefs, etc.); self-medication .

In this study, the instrument H-SCALE contains items related to six, hypertension self-care activities recommended by the Joint National Committee (JNC7: taking medication, following a low-salt diet, engaging in physical activity, avoiding tobacco smoke, using strategies to maintain or lose weight, and reducing alcohol consumption. Each of these subscales is scored and then cut points are applied to determine the individual's adherence to the activity.

1.6.2 Factor associated Self-Care

Factors related to self-care refer to demographic factors and health-related factors. Demographic factors included age, gender, marital status, level of education, and family income. Health-related factor is duration of hypertension and self-efficacy control of hypertension.

Factors	Description
Age -	Adult age(age more than 18 years old)
Gender -	Male and female respondent
Marital status -	Single, married, or widow
Level of education -	Education levels that are primary school, secondary school, and tertiary school which college or university.
Family income -	Means earning in the family.
Duration of hypertension -	Less than 10 year or more than 10 years.
Degree of hypertension (mmHg) -	First degree (140 – 159/90 – 99) Second degree (160 - 179/100 –109) Third degree (more than 180/more than 110)
Self-efficacy -	The confidence of individuals in managing and controlling their blood pressure.

1.6.3 Hypertension Patient:

According to World Health Organization (WHO) (2015), hypertension which also known as high or raised blood pressure is a condition in which the blood vessels have persistently raised pressure, putting them under increased stress. Normal adult blood pressure is defined as a blood pressure of 120 mmHg when the heart beats (systolic) and a blood pressure of 80 mmHg when the heart relaxes (diastolic). When systolic blood pressure is equal to or above 140 mmHg and/or a diastolic blood pressure equal to or above 90 mmHg the blood pressure is considered to be raised or high.

1.6.4 Medical Ward

Medical ward is defined as a hospital ward in which patients are being treated by drugs rather than surgery (English dictionary, 2015). For this study, researcher used medical wards at Hospital USM such as 7 Utara and 7 Selatan.

1.7 Significant of Study

The purpose of this study was to measure the self-care behavior for patient with hypertension and reduce poor self-care. This also can determine the factors that associated with self-care behavior. Nurses should assess patient in their self-care in order to help patient facing their condition within their disease. This also can reduce the hospitalization beside control the hypertension. In addition, this also can empower patient for more engaging in healthy behavior and symptom monitoring in hypertension patients. Moreover, the study can help nurses to develop self-management programs for hypertensive patients. This study assesses the behavioral activities recommended for optimal management of high blood pressure among hypertension patient in Hospital USM. This study is valuable to patients to gain a better understanding about the self-care in hypertension patients. This also can help in future planning of health promotion of self-care in hypertension and controlling blood pressure then prevention of complication of hypertension.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, it provides general information about self-care in hypertension and associated factor in self-care. It also provides an overview on the epidemiology and global impact of hypertension respectively. Self-care in hypertension and factors associated with self-care will be discussed in the chapter. Finally, the chapter also details the conceptual framework, Social Cognitive Theory in this study.

2.2 Prevalence of Hypertension

Hypertension was identified as the underlying or contributing cause in more than 360,000 deaths in 2010 (Go, Mozaffarian, Roger, et al., 2014). Data on prevalence rates of HTN in other parts of the world are up-to-date and indicate higher rates of HTN in Arab countries compared with the United States, such as Syria and Morocco. For example, HTN prevalence is 40.6% in Syria (Maziak, Rastam, Mzayek, Ward, Eissenberg & Keil, 2007).

Hypertension was the leading preventable risk factor for death among adults 40 years of age and above in China. China already have 177 million adults with hypertension and there were total mortality was 48% higher among hypertensive patients than those without hypertension (Lozano, Naghavi, Foreman, Lim, Shibuya, et al., 2010).

Prevalence of hypertension in Arab countries was reported to be 29.5% which was higher than other regions in the world (Tailakh, Evangelista, Mentes, Pike, Phillips & Morisky, 2014). In a study, US Health and Human Services Million Hearts had an initiative was to prevent one million heart attacks and strokes between 2012–2016

through improving hypertension control to 70% or greater among patients currently in clinical care (Ritchey, Wall, Gillespie et al., 2014). There was a clear trend of increasing prevalence of hypertension among the adult population in Malaysia from 32.9% in adults aged 30 years and above reported in National Health and Morbidity Survey II (NHMS II) to 42.6% in the NHMS III survey (Kiau, Med & Kaur, 2013).

2.3 Self-Care in Hypertension

Self-care for hypertension included taking medicine as prescribed, monitoring blood pressure response to therapy, and adopting lifestyle recommendations increasing exercise, decreasing salt (Buna Bhandari, 2012). The importance of self-care in hypertension was to reduce the complication such as stroke and heart attack. Researchers had emphasized that compliance with hypertension self-care guidelines such as weight reduction, smoking cessation, a low-sodium diet, and physical activity can contribute substantially to controlling blood pressure.

Through this self-care, hypertension patients must adjusted their behavior to control blood pressure and prevent hypertensive complications (Lee et al., 2010). In a previous study, the researcher report that adults in 20 states (n=24,447) reported that in response to their hypertension diagnosis, 70.9% had modified their eating habits, 79.5% had limited or eliminated their use of salt, 79.2% had reduced or eliminated alcohol consumption, 68.6% were engaged in physical activity, and 73.4% were taking antihypertensive medications (Warren-Findlow, Basalik, Dulin, Tapp, & Kuhn, 2013).

In a study which included 186 patients. The result showed that more than half of the sample (58.6%) reported being adherent to hypertension medication protocols. Less than one-fourth were following a low-salt diet on most days of the week. More than half (52.2%) were engaging in physical activity and some exercise on most days of the

week. Three-fourths were non-smokers. Only 30% of participants followed good weight management practices. More than half of participants reported adhering to medication recommendations and prescribed physical activity levels (58.6% and 52.2%, respectively). Following practices related to weight management was less frequent, (30.1%) and adherence to low-salt diet recommendations was also low (22.0%) (Warren et al., 2011). The prevalence rates of individual hypertension self-care activities are shown in Table 2.1.

Table 2.1 Prevalence of self-care activity

Self-care Activity	Percentage (%)
Medication adherence	58.6
Low-salt diet adherence	22.0
Physical activity	52.2
Nonsmoking	74.7
Weight Management	30.1

As recommended self-care by the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) which including adhering to medication regimens, engaging in physical activity, following a healthy, low-salt and low-fat diet similar to the Dietary Approaches to Stop Hypertension (DASH) diet, maintaining a healthy weight, reducing alcohol intake; and avoiding tobacco (Warren et al., 2013).

Hypertension was a chronic illness that needs a person to adhere to the medication and treatment. Persons with hypertension should take medication as prescribed. Dietary adjustments such as DASH diet can reduce the severity of hypertension. The persons with hypertension should eat a diet low in salt, calories, cholesterol, and saturated fat. The Dietary Approaches to Stop Hypertension (DASH)

demonstrated that modification in diet can aid in controlling blood pressure. The DASH recommended healthy eating patterns in order to control hypertension (Chen, Litvak, Howe, Parvez, & Ahsan, 2006). It benefited to patient by adoption of the Dietary Approaches to Stop Hypertension (DASH) eating plan which is a diet rich in fruits, vegetables, and low in fat dairy products with a reduced content of dietary cholesterol as well as saturated and total fat.

Hypertensive patients could provide a reduction of mortality risks similar to a permanent reduction of 40 mmHg in blood pressure by smoking cessation (Wen, Tsai, Chan, Tsai, Cheng, & Chiang, 2008). A lifestyle of physical activity can also reduced the risk of developing hypertension. Weight management also helped in reducing blood pressure. The ways to manage weight were balancing the diet, reducing salt intake, and taking regular exercise. In Malaysia, 78.4% of known hypertensive patients claimed to be on oral antihypertensive medications, 82.7% were on specific diet, and 75.2% had been advised to be more physically active or to start exercising, whereby half of them received treatment at the government primary health clinics (53%) (Ministry of Health, 2011). As in this study, researcher focused on self-care in hypertension such as medication taking dietary adherence, physical exercise, smoking, and weighting management.

2.4 Association between Selected Demographic Data and Self-Care

Self-care was important in managing the disease and maintaining for healthy lifestyle. Specifically, based on the literature, we included a number of personal factors (i.e., age, gender, marital status, duration of hypertension and hypertension control self-efficacy) in this study to predict hypertension self-care behaviors of hypertensive patients. Based on reviews of social cognitive theory and the existing literature, it was hypothesized that self-efficacy, knowledge, and social support would be positively related to self-care behavior after controlling for relevant confounders among elderly, low-income Korean women with hypertension.

The personal factors had been found to influence hypertension self-care behaviors. Age and marital status had been consistent correlates of hypertension self-care behaviors. Many studies had reported that older women were more likely to engage in hypertension self-care behaviors than younger women (Lee et al., 2010) Married women were found to be more likely to be adherent to medications when compared with un- married women (Trivedi et al., 2008). Others studies result as older age (Peters and Templin, 2008), female gender (Li et al., 2008; Trivedi et al., 2008) were all predictors of hypertension self-care behavior.

In a study, the factors influencing hypertension self- care behaviors of women include personal factors (age, marital status, BMI, years of having hypertension, self-efficacy, and knowledge of hypertension) and environmental factors (social support). (Lee et al, 2010). Researcher reported that older age and longer duration of hypertension were additional variables associated with better self-care behaviors. A longer duration of hypertension was related to an increased adoption of hypertension self-care behaviors (Lee et al., 2010). Martin et al. (2008) also noted that among hypertensive African

American women in the United States, those with higher levels of self-efficacy were more likely to report greater efforts to be physically active.

The positive link between years of hypertension and self-care behavior might have been a result of more learning opportunities available to those with longer years of hypertension. There also finding implied that future self-care intervention efforts may need to be focused more on those who were at relatively high risk for low levels of self-care such as younger patients and individuals recently diagnosed with hypertension. This was due to increase the self-care behavior in controlling the hypertension (Lee et al., 2010). The finding that older adults were more likely to be adherent to blood pressure medication regimens was consistent with previous research. Our finding that women were more likely to be adherent with medication regimens than men was inconsistent with other research (Warren et al., 2011).

2.5 Association between Self-Efficacy and Self-Care

Self-efficacy had been a major predictor of self-care behavior for chronic disease management such as hypertension (Martin et al., 2008) & chronic kidney disease (Curtin et al., 2008).An increasing number of researches had demonstrated that self-efficacy, defined as one's perception of his or her ability to perform a specific task to successful completion, was an important predictor of self-care behavior among individuals with diverse chronic health conditions (Sharoni & Wu, 2012; Warren-Findlow, Seymour, & Brunner Huber, 2012). Sharoni and Wu (2012) demonstrated a positive relationship between self-efficacy and self-care behavior in Malaysian patients with type 2 diabetes.

In a previous study by Lee et al. (2010), in context of managing hypertension, the level of self-efficacy of an individual had often identified as a significant

contributing factor to self-care behaviors. They also found that self-efficacy played a significant role in predicting a number of self-care behaviors. In addition, finding from previous study, together with those of previous studies, underscored the importance of incorporating strategies to improve self-efficacy when designing an effective intervention for chronic disease management such as hypertension control.

2.6 Instrument

The instrument that used was Hypertension Self-Care Level Effect (H-SCALE) and self-efficacy to manage hypertension. Previous research had led to the development of a self-report measure to assess the six JNC 7 hypertension self-care activities (Ndumele, Shaykevich, Williams & Hicks, 2010). The Hypertension Self-Care Activity Level Effects, or H-SCALE, was a self-report assessment designed to measure the recommended self-care activities in a way that would facilitate examining the theoretical dose-response relationship between adherence to these behaviors and better control of BP. The H-SCALE was also designed to be a counseling tool to aid primary care physicians with hypertensive patients who are seeking to achieve BP control. H-SCALE scored reflecting better self-care practices should be associated with lower BP readings (Warren, Seymour and Huber, 2012). Hypertension self-care was essential to further our understanding of activities related to hypertension and BP control. Self-efficacy to manage hypertension was adapted from self-efficacy to manage disease in general by Lorig, Stewart, et al. It was to know how confident the patients in doing certain activities.

2.7 Conceptual Framework

Social Cognitive Theory (Bandura, 1986) offered a sound ground for understanding an individual's self-care behaviors. According to Bandura (1986), a dynamic, ongoing process in which personal factors such as cognitive, affective, and biological variables (e.g., belief, self-efficacy, knowledge) and environmental factors (e.g., social support) interacted and influenced behavior (e.g., self-care behavior).

Social Cognitive Theory was one of health promotion theory. Previous research had applied the Social Cognitive Theory to understanding behaviors related to the management of a variety of chronic diseases including diabetes, hypertension, and osteoporosis (Hsieh et al., 2008). But in this study, researcher used the factors such as sosiodemographic characteristic which including age, gender, marital status, duration of hypertension, family income and self-efficacy in hypertension.

Self-efficacy, a key concept of the Social Learning Theory and a determining component of behavioral change and maintenance, was defined as an individual's beliefs regarding individuals capability to produce designated levels of performance (Bandura, 1986). Self-efficacy had been a major predictor of self-care behavior for chronic disease management such as hypertension (Martin et al., 2008).

A study had combined key concepts from the Social Cognitive Theory and additional variables from empirical literature to systematically investigate correlates of hypertension self-care behaviors among Korean Americans (Lee et al., 2010). In previous study, the researcher included a number of personal factors (i.e., age, gender, marital status, employment status, years in U.S., duration of hypertension, hypertension knowledge, hypertension belief, and hypertension control self-efficacy) and environmental factors (i.e., social support) in analysis to predict hypertension self-care

behaviors of hypertensive Korean Americans (Lee et al.,2010). Such information can helped health care providers to identify significant predictors of hypertension self-care behaviors and focused their efforts on variables that can be modified through appropriate nursing interventions.

Social cognitive theory provided the framework for examining the correlates associated with self-care behaviors in elderly, low-income Korean women with hypertension. Social cognitive theory, which was used to describe the interactions between personal, behavioral, and environmental factors in health and chronic disease management, was recognized as a useful framework for understanding an individual's self-care behavior (Lee et al., 2010). Previous studies used social cognitive theory to understand behaviors in various health-related situations such as physical activity, healthy diet, hypertension, and cardiovascular disease (Martin et al., 2007; Hsieh et al., 2008).

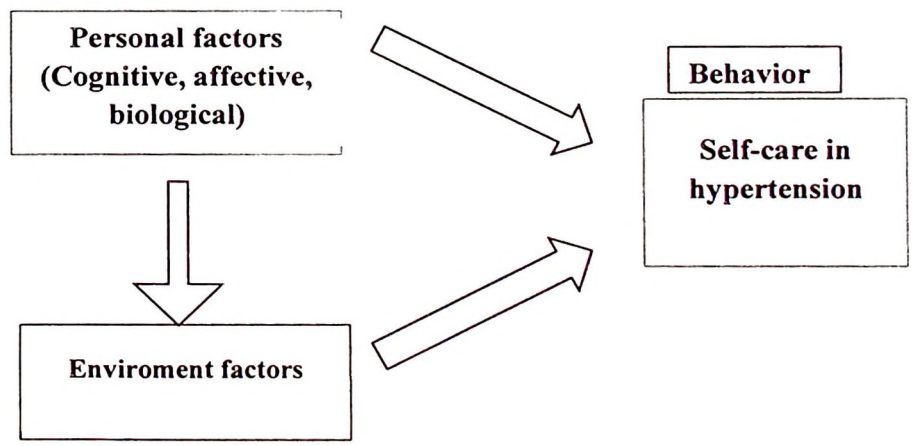

Figure 2.1 Social Cognitive Theory

This theory explained how people acquire and maintain certain behavioral patterns. The theory can also be used for providing the basis for intervention strategies. According to the theory, behavior was learned by observation, imitation, and positive reinforcement. The theory also suggested people learn by noticing the benefits of actions that they observed other people performing (Bandura, 1986). According to this theory, behavioral change was determined by environmental, social, personal, and behavioral elements. These factors influenced the each other factor. Behavior was guided by expected consequences. There were six main concepts in Social Cognitive Theory:

1. Reciprocal determinism: the person, behavior, and environment influence one another

2. Behavioral capability: the knowledge and skill needed to perform a behavior

3. Expectations: anticipated outcomes

4. Self-efficacy: confidence in one's ability to take action

5. Observational learning: learning by observing others

6. Reinforcements: responses to a behavior that increase or decrease the likelihood of reoccurrence

(Bandura, 1986)

In this study, researcher used concept in the theory which including person, behavior and environment, behavioral capacity, and self-efficacy. Bandura (1986) discussed two types of expectations: self- efficacy and outcome expectancy such behavior. Self-efficacy caused the change, it was the most crucial factor, while outcome expectancy was the person's evaluation that the behavior would lead to a positive outcome (Bandura, 1986).

The personal factors had been found to influence hypertension self-care behaviors. Specifically, based on the literature, we included a number of personal factors (e.g. sociodemographic data, self-efficacy) and environmental factors (e.g. social support) to predict hypertension self-care behaviors of hypertension patients. Such information can helped health care providers to identify significant predictors of hypertension self-care behaviors and focus their efforts on variables that can be modified through appropriate nursing interventions.

Within the Social Cognitive Theory, self-care management for chronic disease occured in an environment that includes the support from formal health care providers. Self-efficacy had been a major predictor of self-care behavior for chronic disease management such as hypertension. Sociodemographic data and self-efficacy were examined with self-care behavior in hypertension as hypothesis in this study.

The sociodemographic data such as age, gender, marital status, educational level, duration of hypertension, monthly income and self-efficacy affected the self-care behavior in managing hypertension. Perceived self-efficacy affects people's choice of activities and behavioral settings, how much effort they expend, and how long they will persist in the face of obstacles and aversive experiences. Furthermore, self-care in hypertension can be predicted with patient 'self-efficacy in hypertension.