CHAPTER 5

Conclusions and Recommendations

This chapter is organized into four parts including conclusions, implications, limitations, and recommendations for further research.

Conclusions

The purpose of this cross-sectional predictive correlational study was to test the causal relationships among the study variables including physical function, cognitive function, social support from family, knowledge of hypertension, provider-patient communication, perceived benefits, perceived susceptibility, perceived severity, perceived barriers, perceived self-efficacy to adherence and adherence to therapeutic regimens among older adults with hypertension. The conceptual framework of this study was based on the empirical data from the literature review focusing on the variables that could be modified by nursing intervention. Data collection was conducted from March to May 2014. A total of 341 Thai older adults with hypertension who were diagnosed with hypertension for at least 6 months, took at least one type of antihypertensive drug, and aged 60 years and over were randomly selected using simple ransom sampling from five hypertension clinics at four community hospitals in Phayao province in northern Thailand. Nine instruments were used to collect the data including (1) the Demographic Data Form, (2) the Chula Mental Test (3) the Chula Activities of Daily Living Index (4) the Hypertension Knowledge-Level Scale (5) the Health Belief for Hypertensive Patient Scale (6) the Hypertensive Self-efficacy Scale (7) the Hypertensive Social Support Scale (8) the Provider-Patient Communication Scale (9) the Hypertensive Adherence to Therapeutic Regimens Scale. The internal consistency coefficients of all instruments varied from 0.799 to 0.847. Descriptive statistics were used to describe characteristics of the participants and of the eleven variables in the study. Pearson's product moment correlation was used to analyze the relationship between ten independent variables and adherence to therapeutic regimens. Path analysis analyzed

by a structural equation modeling using the LISREL 8.80 (student edition) program was used to test and develop the hypothesized model of adherence to therapeutic regimens among older adults with hypertension.

The findings of this study are summarized into two points as follows:

1. The findings of the correlation among independent variables and adherence to therapeutic regimens showed that perceived self-efficacy to adherence had a high positive association with adherence to therapeutic regimens (r = .75, p < .01). Perceived susceptibility (r = .36, p < .01), perceived severity (r = .33, p < .01) and social support from family (r = .44, p < .01) had a moderate positive relationship with adherence to therapeutic regimens. Provider-patient communication (r = .24, p < .01) and perceived benefits (r = .26, p < .01) had a low positive relationship with adherence to therapeutic regimens. Cognitive function had a low negative relationship with adherence to therapeutic regimens (r = -.20, p < .05). However, physical function, knowledge of hypertension and perceived barriers had no significant relationship with adherence to therapeutic regimens.

2. A causal model of adherence to therapeutic regimens showed the best fit with the empirical data. The fit indices measured were acceptable values; χ^2 = 23.73, df = 16, p = .10, RMSEA= 0.038, GFI = .99, AGFI = .95, CFI = .98, SRMR = 0.037. All parameters in the model yield a significant p-value. This model could explain 60% of total variance in adherence to therapeutic regimens and 23% in perceived self-efficacy to adherence. Adherence to adherence to therapeutic regimens was directly predicted by physical function (ß = .94, p < .05), perceived self-efficacy to adherence (ß = .69, p < .01), perceived severity (ß = .49, p < .01), provider-patient communication (ß = .34, p < .05), social support from family (ß = .14, p < .01), and perceived barriers (ß = -.27, p < .01). Perceived self-efficacy to adherence was directly predicted by perceived susceptibility (ß = 2.09, p < .01), cognitive function (ß = -1.20, p < .01), perceived barriers (ß = .29, p < .01), and social support from family (ß = .23, p < .01). Perceived susceptibility was directly predicted by provider-patient communication (ß = .20, p < .01) and social support from family (ß = .06, p < .01). Perceived severity was directly predicted by provider-patient communication (ß = .21, p < .01) and social support from family (ß = .06, p < .01). Perceived barriers was directly predicted by provider-patient

communication (ß = .46, $p < .01$) and knowledge of hypertension (ß = .23, $p < .01$). Knowledge of hypertension was directly predicted by provider-patient communication (ß = .15, $p < .01$) and cognitive function (ß = .51, $p < .01$). Perceived benefits had neither a significant direct or indirect effect on adherence to therapeutic regimens but it was directly predicted by provider-patient communication (ß = .17, $p < .01$) and social support from family (ß = .03, $p < .01$). Also, physical function was the most powerful predictor of adherence to therapeutic regimens. While, perceived self-efficacy to adherence, perceived severity and perceived barriers were a mediator variable of adherence to therapeutic regimens, whereas perceived self-efficacy to adherence was the most powerful mediator variable in this model.

Implications of the Study

The findings of this study provide primary nurses with empirical evidence to understand adherence to therapeutic regimens and its predicting factors among older adults with hypertension and also facilitate to develop substantial nursing knowledge, nursing research, nursing administration, nursing practice, and nursing education which are presented as follows:

Contribution to Nursing Knowledge

This study provides a new nursing knowledge regarding factors directly and indirectly predicting of adherence to therapeutic regimens among older adults with hypertension. The new model specifically indicates that physical function, perceived self-efficacy to adherence, perceived severity, provider-patient communication, perceived barriers, and social support from family directly affect adherence to therapeutic regimens. Moreover, social support from family indirectly affects adherence to therapeutic regimens via perceived self-efficacy to adherence, provider-patient communication, perceived susceptibility, knowledge of hypertension, perceived barriers and perceived severity. Cognitive function indirectly and negatively influences adherence to therapeutic regimens via perceived self-efficacy, knowledge of hypertension and perceived barriers. Provider-patient communication indirectly affects adherence to therapeutic regimens through perceived susceptibility, perceived severity, perceived barriers, knowledge of hypertension, and perceived self-efficacy to adherence.

Perceived barriers and perceived susceptibility indirectly influence adherence to therapeutic regimens via perceived self-efficacy to adherence. Knowledge of hypertension indirectly affects adherence to therapeutic regimens through perceived barriers and perceived self-efficacy to adherence. Therefore, enhancing adherence to therapeutic regimens among older adults with hypertension by nursing role, these predicting factors should be extraordinarily concerned in order to meet optimal blood pressure control.

Implications for Nursing Research

This study expands the new knowledge of factors directly and indirectly affecting adherence to therapeutic regimens among older adults with hypertension. For nursing research, these factors affecting adherence, including physical function, perceived self-efficacy to adherence, perceived severity, provider-patient communication, perceived barriers, social support from family, perceived susceptibility, cognitive function, and knowledge of hypertension should be integrated into nursing intervention and tested for their effects on adherence to therapeutic regimens among older adults with hypertension.

Implications for Nursing Administration

The results of this study should be engaged for developing nursing policy and strategy regarding planning to promote adherence to therapeutic regimens among older adults with hypertension. Additionally, this finding should be provided to community hospital administrators for supporting alternative basic information in order to establish their health care policy and strategy plans to improve the effective health care services of enhancing adherence to therapeutic regimens among older adults with hypertension.

Implications for Nursing Practice

The results of this study provide a new knowledge of relevant factors affecting adherence to therapeutic regimens among older adults with hypertension, in particular for the nurses working in hypertension clinics to integrate a comprehensive assessment of these significant factors into the nursing care for older persons with hypertension. In addition, sufficient knowledge of factors affecting adherence to therapeutic regimens among the older adults with hypertension allows developing understanding for nurses regarding the patients' problems, other barriers and also the supplementary resources

for patients to perform recommended behaviors for controlling blood pressure. Essentially, all significant predicting factors, including physical function, perceived self-efficacy to adherence, perceived severity, provider-patient communication, perceived barriers, social support from family, perceived susceptibility, cognitive function, and knowledge of hypertension affecting adherence to therapeutic regimens among older adults with hypertension should be guided and implied to tailor nursing intervention for improving better adherence to therapeutic regimens.

Implications for Nursing Education

This study should be applied to teaching nursing students in order to improve their understanding regarding factors affecting adherence to therapeutic regimens and be able to create a nursing care plan to promote adherence to therapeutic regimens among older adults with hypertension. Additionally, the valuable basic information of factors affecting adherence to therapeutic regimens among older adults with hypertension should be employed to develop a nursing curriculum focusing on encouragement of nursing knowledge and skills for coaching and teaching nursing students to provide rigorous nursing care and appropriately promoting adherence to therapeutic regimens among older adults with hypertension.

Limitations of the Study

The limitations of this study that may be limited in terms of the ability of generalization because of two issues related to the methodology of research and are presented as follows:

1. Most of participants could control their blood pressure, thus this model may be limited application for older adults with uncontrolled blood pressure.

2. Considering the-26 item Health Belief for Hypertensive Patient Scale (HBHS) developed by Pinprapapan (2013) in this study, it was used to measure the total score of health belief that may be limited by the number of items to evaluate four subscales, including perceived benefits, perceived susceptibility, perceived severity and perceived barriers.

Recommendations for Further Research

The recommendations for further study based on the study finding are presented as follows:

1. This model should be tested for the causal relationship of adherence to therapeutic regimens among older adults with uncontrolled blood pressure to confirm application for these groups.

2. A further study, the health belief scale should be further developed its items in order to adequately examine four variables based on health belief model (perceived benefits, perceived susceptibility, perceived severity, and perceived barriers). This would effectively improve determining the causal relationship of adherence to therapeutic regimens as well as other effects of those variables.

3. A further study should be replicated in various age groups of older adults with hypertension, including young-old age, old-old age, and oldest-old age to identify different or similar factors that contribute to adherence to therapeutic regimens, because adherence to therapeutic regimens may be affected by age change leading to poor cognitive function that influences adherence to therapeutic regimens.