Factors Predicting Medication Adherence among Cardiovascular Patients in a Primary Care Setting

Pachanat Tantikosoom, Yupin Aungsuroch, Chanokporn Jitpanya

Abstract: Adherence to prescribed medications, among individuals with cardiovascular disease, has long been considered important in terms of disease management, mortality reduction and achievement of optimal health. However, in Thailand, minimal research in this area of concern has been undertaken. Thus, the purposes of this study, using a cross-sectional research design, were to examine in Thais with cardiovascular disease: a) the correlations among select psychosocial demographic characteristics (i.e. age, gender, marital status and education), presence of co-morbidities, medications taken daily and medication adherence; and, b) the best predictors (psychosocial demographic characteristics [i.e. age, gender, marital status and education], presence of co-morbidities, and medication taken daily) of medication adherence.

Subjects included 160 randomly selected patients, with cardiovascular disease, from one primary care setting in Thailand. Study instruments included a researcher-developed psychosocial demographic characteristics questionnaire and the Thai version of the Morisky Medication Adherence Scale. Data were evaluated using descriptive statistics, Pearson's, Gamma and Phi-Cramer's V correlations, and hierarchical multiple regression

The results revealed a significant negative correlation between the presence of co-morbidities and medication adherence. No other significant correlations were found among the variables. Hierarchical multiple regression analysis revealed the presence of co-morbidities, secondary education and male gender together explained 16.3 % of the variance in predicting medication adherence. The findings may prove helpful in the development of intervention guidelines regarding medication adherence for patients who have cardiovascular disease and are being cared for in a primary care setting.

Pacific Rim Int J Nurs Res 2011 ; 15(4) 278-287

Key words: medication adherence; cardiovascular patients; primary care setting;

Introduction

Cardiovascular disease (CVD) is a leading cause, worldwide, of morbidity and mortality and recognized as including co-morbidity conditions such as hypertension, hypercholesterolemia, heart failure and ischemic heart disease.[1] Adherence to

***Correspondence to:* Pachanat Tantikosoom,** *RN, PhD (Candidate) Faculty of Nursing, Chulalongkorn University, Borommaratchachonnani Srisataphat Building, Patumwan District, Bangkok, Thailand, 10330*
E-mail: *pachanut.t@chula.ac.th*
Yupin Aungsuroch, *RN, PhD. Associate Professor, Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand.*
Chanokporn Jitpanya, *RN, PhD. Assistant Professor, Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand.*

medically prescribed pharmacologic regimens is essential in the management of CVD, mortality reduction and achievement of optimal health outcomes.[2-7] Prior research has found an increased incidence of disease exacerbations among patients who do not adhere to medically prescribed pharmacologic regimes compared with those who do comply with such regimes.[7] Physicians and other health care providers have sought to increase medication adherence by prescribing more evidence-based medications. However, this effort has not been found to increase adherence to medically prescribed pharmacological regimens.[8]

Review of the Literature

Cardiovascular disease is a chronic immune inflammatory, fibro-proliferative disease of the arterial wall that begins during adolescence and slowly progresses throughout life.[9-11] The beginning of this process starts with the occurrence of an intact, but leaky, dysfunctional endothelium through which circulating atherogenic lipoproteins and low-density lipoproteins (LDL) extravagate into the sub-endothelial space, where the atherogenic lipoproteins are retained and modified (e.g., oxidized) and become cytotoxic, proinflammatory, chemotaxic and proatherogenic.[12]

It is well known that risk factors related to the development of CVD include; being elderly; having a family history of CVD; being a smoker; having hypertension; being obese; being physically inactivity; not adhering to medical regimens; having hyperlipidemia; and, having a high level of stress.[13,14] In addition, low socioeconomic status, social isolation, lack of access to health care, low literacy, complex co-morbidities, cultural beliefs, language barriers and environmental experiences also are factors that may affect individuals with CVD.[15]

Angina pectoris, the most common symptom experienced by individuals with CVD, is described as transient chest discomfort and/or heaviness. One may experience chronic stable angina or an acute coronary syndrome ranging from unstable angina to non-ST-segment elevation myocardial infarction to ST-segment elevation myocardial infarction.[16,17] Angina most often is treated with medications (i.e. ß-blockers, calcium antagonists and long-acting nitrates) to decrease the occurrence of ischemia and prevent a myocardial infarction (MI) and death. However, a percutaneous coronary intervention or coronary artery bypass grafting may be required to increase needed revascularization to the heart. Although, revascularization provides relief of symptoms and an improved quality of life, the treatment necessitates long-term use of cardiovascular mediations and adherence to medical regimens.[13-15]

If one engages in poor adherence to medication regimens, such action can lead to more frequent hospitalizations, increased healthcare expenditures and a higher risk of adverse health outcomes or cardiac events.[18-20] Research has shown patients with poor adherence to taking beta-blockers are 2.6 times more likely to die within 1 year after a MI compared to patients who take their beta-blockers.[21] In addition, post-MI patients who have discontinued either their beta-blockers, statins or aspirin, for one month, have been found to have a significant increased risk of mortality within one year.[22] Prior research has shown 10% to 25% of newly diagnosed patients with CVD discontinue medication within 6 months after diagnosis, while 21% to 47% of them do so within 24 months.[23] In addition, 8% to 20% of patients with an MI or stable angina have been noted to stop taking prescribed medications at 6 months.[18]

Medication adherence refers to the patient's ability and willingness to follow recommended health practices regarding medication management.[18,24] Prior research found factors affecting medication adherence can be categorized into six dimensions: a) health care team practices; b) economics; c) social

relationships; d) therapy-related events; e) patients' health-related conditions; and, f) patients' psychosocial demographics.[3,19,24] Health care team practices refer to: health care providers' knowledge of evidence-based practices; compliance with institutional guidelines; clinical decision making; conveyance of the importance of adherence to medication therapies; and, limited communication with patients about their medications.[3,19-21] Economics refer to patients' personal financial status, while social relationships address the type of interactions patients' have with health care providers and family members.[19-21,24] Therapy related events refer to number of medications taken and their adverse effects; ineffective results of medications and medication requirements (i.e. frequent dosing or times when medications are to be taken), while health-related conditions address such aspects as co-morbidity, understanding of illness symptoms, symptom burden and cognitive impairment.[3,22,24-25] Also, patient's psychosocial demographic factors address: age, gender, educational level, marital status, perception of medication importance; and developing a habit of taking or not taking prescribed medications.[3,19-21]

Psychosocial demographic factors and their association with medication adherence have been found to be affected by the specific culture in which studies are conducted. For example, with respect to age, individuals, less than 65 and more than 80 years of age, have been found to more likely not adhere with warfarin therapy, while those less than 65 years of age were found to be even less compliant with warfarin therapy than a control group.[26-27] On the other hand, the diet and exercise of individuals, who were more than 65 years of age and experiencing congestive heart difficulties, were found not to be related to medication adherence.[20,28] One's race,[20,27] health knowledge and beliefs,[3,24,29] educational level,[19-20,30] status,[20,30] gender,[20,30] and economics[20,30] also have been shown to be related to medication non-adherence.

In addition to psychosocial demographic characteristics, presence of co-morbidity, medications taken daily, severity of illness and complexity of drug regimens (i.e. amount and frequency) have been found to influence medication adherence.[3,18-21,24,31] Thus, based upon a review of literature and findings of prior research, this study sought to examine in Thais with cardiovascular disease: a) the correlations among select psychosocial demographic characteristics (i.e. age, gender, marital status and education), presence of co-morbidities, medication taken daily and medication adherence; and, b) the best predictors (select psychosocial demographic characteristics [i.e. age, gender, marital status and education], presence of co-morbidities and medication taken daily) of medication adherence.

Method

Design: This study used a cross-sectional survey design, using an interview approach.

Ethical Considerations: Prior to data collection, the Ethics Committee of the primary investigator's (PI) university and the administrator of the public health hospital, used as a study site, approved the study's protocol. In addition, all potential subjects were provided information regarding: the nature of the study; what study involvement entailed; voluntary participation; anonymity and confidentiality issues; and, the right to withdraw without repercussions at any time. All subjects consenting to take part in the study were required to sign a consent form.

Subjects and Setting: A total of 165 Thais, being treated for cardiovascular disease at the Cardiovascular and Hypertension Primary Care Clinic of a 60 bed public health hospital in rural, central Thailand, were randomly selected to participate in the study. Potential subjects were identified, two

days prior to a scheduled clinic visit, via the outpatient clinic's appointment system. Each potential subject's medical record was reviewed to see if he/she met the inclusion/exclusion criteria. Inclusion criteria were adult Thais who were: diagnosed with CVD; 35 years of age or older; able to read and speak Thai; not cognitively impaired; and, willing to participate. Individuals identified as contending with severe health problems were excluded as possible subjects.

One day prior to a potential subject's clinic appointment, the subject was telephoned to remind him/her of the appointment. Of the 165 potential subjects identified and telephoned, only 160 were able to successfully complete the study (retention rate = 96.9%). As noted in **Table 1**, subjects ranged in age from less than 50 to over 80 years of age (mean age of 61.1) and, predominately: were female, married, educated at the elementary school level; had three co-morbidities; and, took four or more medications daily.

Table 1 Sample characteristics (n=160)

Variables		n (%)
Age in years (Mean = 61.1 years; SD = ± 9.6)		
	< 50	56 (35.0)
	50-60	75 (46.9)
	61-70	26 (16.2)
	71-80+	3 (1.9)
Gender	Female	91 (56.9)
	Male	69 (43.1)
Marital status	Single	49 (30.6)
	Married	111 (69.4)
Education	none	21 (13.1)
	Elementary	134 (83.8)
	Secondary	5 (3.1)
Presence of co-morbidities	One	12 (7.5)
	Two	4 (25.6)
	Three	75 (46.9)
	Four	29 (18.1)
	Five	3 (1.9)
Medications taken daily	1-3	32 (20.0)
	4-6	63 (39.4)
	>6	65 (40.6)

Instruments: Two instruments were used: a researcher (PI)-designed *Psychosocial Demographic, Co-morbidity and Medication Survey (PDCMMS)* and the Thai version of the *Morisky Medication Adherence Scale (MMAS)*. The *PDCMMS* consisted of six items that measured: age, gender, marital status, education, presence of co-morbidities and medications taken daily. All of these elements were selected because they have been found, in prior research, to be related to medication adherence.[3, 8, 10-11] Prior to its use, the content validity of the PDCMMS was examined by seven experts (one cardiologist and six nurses with experience in cardiovascular care) who found the content validity to be 0.90. In addition, to ensure the subjects would be able to understand the wording and meaning of the individual items, PDCMMS was pilot tested on ten subjects, from a primary care setting not associated with this study, who had demographic characteristics similar to the study subjects.

The second instrument used in the study was the Thai translated-version of the eight-item Morisky Medication Adherence Scale *(MMAS)*,[22] which was used to assess subjects' medication taking behavior (medication adherence/non-adherence). The Thai translation of the MMAS was carried by Sakthong and colleagues,[30] with the Thai version demonstrating acceptable psychometric properties (internal consistency reliability = 0.61; test-retest reliability = 0.83, $p<0.001$; and, positive and negative predictive value = 71% and 43%, respectively). Examples of questions were: "I sometimes forget to take my medications?"; "I have missed taking my medications during the last two weeks?"; "I stop taking my medications when I am feeling worse?"; and, "How often do you have difficulty remembering to take you medications?" Seven of the questions had possible responses of: "Yes = 0 or "No" = 1. The one question related to the frequency with which one had difficult remembering to take medications had possible responses of: 0 = "difficulty remembering everyday of the week;" 0.25 = "difficulty remembering 5 to 6 times per week;" 0.5 = "difficulty remembering 3 to 4 times per week;" 0.75 = "difficulty remembering 1 to 2 times per week;" and, 1= "no difficulty remembering." Prior to determining the instrument's total score, the one item stated in positive terms of medication adherence was reversed scored. The medication adherence score, which could range from 0 to 8, was then calculated by summing the responses across all eight items. High scores meant better medication adherence.

Procedure: Potential subjects meeting the inclusion/exclusion criteria were approached by the primary investigator (PI) while waiting, in the clinic reception area, to be seen by their respective physicians. Potential subjects consenting to take part in the study, after being informed about the study and ethical rights, were interviewed in a private part of the clinic's reception area. Each interview involved verbal administration of the two study questionnaires, which took about 10 minutes to complete. Upon completion of the interview, the respective subject was thanked for his/her time. All completed questionnaires were given a code number for the purpose of identification and data entry.

Data analysis: Descriptive statistics were used to analyze demographics, presence of co-morbidities, medications taken daily and the results of the medication adherence questionnaire. Pearson's, Gamma and Phi-Cramer's V correlation analyses were conducted to examine the relationships between medication adherence and the select demographic characteristics (i.e. age, gender, marital status and education), presence of co-morbidities and medications taken daily.

Hierarchical multiple regression was conducted to identify the best predictors (select psychosocial demographics [age, gender, marital status and education], presence of co-morbidities and medications taken daily) of medication adherence. Hierarchical

regression was used instead of stepwise regression due to prior findings strongly indicating that all of the independent variables were correlated and predictive of the dependent variable, medication adherence. In accord with the basic assumption of regression, the independent variables, gender, marital status, education and medications taken daily, were changed to dummy variables before running the regression program.

Results

As shown in **Table 2,** a significant negative correlation was found between the presence of co-morbidities and medication adherence. In addition, hierarchical multiple regression analysis (see **Table 3**) revealed the presence of co-morbidities, secondary education and male gender, together, explained 16.3 % of the variance in predicting medication adherence.

Table 2 Correlations among medication adherence, demographics, presence of co-morbidities and medications taken daily (n = 160)

Variables	Medication adherence
Gender	.320
Marital status	.168
Age	
< 50	.190
50-60	.095
61-70	-.104
> 71	.009
Education	
None	.239
Elementary	-.063
Secondary	-.362
Medication taken daily	
1-3	.055
4-6	.100
>6	-.198
Presence of co-morbidities	**-.256***

Note: * = 0.05 level (2-tailed)

Phi-Cramer's V correlation (gender, marital status and medication adherence); Pearson's correlation (presence of co-morbidities and medication adherence); and, Gamma correlation (age, number of medications taken daily, education and medication adherence)

Table 3 Predictors of medication adherence (n = 160)

Predictors	*B*	*Std Error*	*Beta*	*t*	*Sig*
Constant	7.090	.667		10.631	.000
Age	- .020	.012	-.145	-1.711	.089
Marital status	.349	.242	.115	1.445	.151
Education					
Secondary	-2.244	.660	-.299	-3.400	**.001**
Elementary	-.604	.308	-.170	-1.961	.052
Number of Medications					
4-6	.013	.288	.004	.047	.963
>6	.334	.228	.124	1.467	.144
Presence of co-morbidities	-.347	.117	-.234	-2.970	**.003**
Gender					
Male	-.443	.213	-.168	-2.086	**.039**

***Note: R= .40; R^2 =.163; R^2adj =.118*; R square change = .024; p< .05**

Discussion

Similar to prior research on patients with CVD,[19-21,30,31] this study found the presence of co-morbidities to be a negative predictor of medication adherence. This meant patients, with a number of co-morbidities, had less medication adherence than did those without co-morbidities.[20] The study subjects, in addition to CVD, also had hypertension, diabetes, hypercholesterolemia and osteoarthritis that appeared to impact their medication adherence.

Unlike previous studies, gender was not found to be a positive predictor of medication adherence.[3,19-21] Regression analysis revealed male gender to be negatively predictive of medication adherence, implying females had more medication adherence than did males. This finding appears to be indicative of the culture in rural Thailand in that Thai males have been found to relate more to their physical disease than do females, while rural Thai females are more concerned with or interested in their behavior and self-care.[32,33]

Although education was not found to be significantly correlated with medication adherence, regression analysis revealed secondary education to be negatively predictive of medication adherence. This finding suggests that those with a secondary education had medication adherence less than did those with a different level of education. As shown in prior studies, education may be predictive of medication adherence.[3,19,24,30] Thus, it appears that rural Thais need additional education regarding the importance of medication adherence, as well as effective communication with their healthcare providers to improve their medication adherence.

As in prior studies of individuals with congestive heart failure, age was not found to be significantly correlated with medication adherence.[20,26-28]

In addition, as found in previous studies, marital status was not shown to be correlated with or predictive of medication adherence.[3,19,31]

Limitations

Like all research, this study has limitations. The research was conducted only with rural Thais with CVD, who were receiving care at one primary care setting in Thailand. Thus, generalizability of the findings to other settings and populations is limited. The fact that a cross-sectional design with only 160 subjects was used also may have limited the generalizability of the findings.

Recommendations for future studies

Given that evidence exists that gender affects and positively predicts medication adherence of patients with HIV and hypertension,[34,35] but has not yet been reported with respect to patients with CVD, it is recommended that gender be further explored among these individuals. In addition, it is recommended future studies of medication adherence, with respect to factors within the six dimensions (health care team/health system, socioeconomics, therapy-related, psychosocial demographics and condition-related),[3,19,24] separate medication adherence into low, moderate and high categories so as to facilitate development of medication adherence interventions for individuals with CVD.

Acknowledgment

Appreciation is extended to the 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund) and The Health Development Center for Persons with Chronic Health Problems, Chulalongkorn University for their support in the development and implementation of this research.

References

1. Rolley JX, Davidson PM, Dennison CR, Ong A, Bronwyn E, Salamonson Y. Medication adherence self-report instruments: Implications for practice and research. J Cardiovasc Nurs. 2008; 23(6): 497-505.
2. Shalansky SJ, Levy AR, Ignaszewski AP. Self-reported Morisky score for identifying non-adherence with cardiovascular medications. Ann Pharmacother. 2004; 38(9): 1363-68.
3. Hope CJ, Wu J, Tu W, Young J, Murray MD. Association of medication adherence, knowledge, and skill with emergency department visits by adults 50 years or older with congestive heart failure. Am J Health Syst Pharmacy. 2004; 61(19): 2043-9.
4. Miura T, Kojima R, Mizutani M, Shiga Y, Takatsu F, Suzuki Y. Effect of digoxin non-compliance on hospitalization and mortality in patients with heart failure in long-term therapy: A prospective cohort study. Eur J Clin Pharmacol. 2001; 57(1): 77-83.
5. Li H, Morrow HN, Proctor EK. Post acute home care and hospital readmission of elderly patients with congestive heart failure. Health Soc Work. 2004; 29(4): 275-86.
6. Strömberg A, Bröstrom A, Dahlström U, Fridlund B. Factors influencing patient compliance with therapeutic regimens in chronic heart failure: A critical incident technique analysis. Heart Lung. 1999; 28(5): 334-41.
7. Chapman PJ. A case report of acute heart failure caused by a patient delaying taking his diuretic medication. Aust Dent J. 2002; 47(1): 66-7.
8. Kulkarni SP, Alexander KP, Lytle B, Heiss G, Peterson ED. Long-term adherence with cardiovascular drug regimens. Am Heart J.2005; 151(1): 185-91.
9. Glass CK, Witztum JL. Atherosclerosis. The road ahead. Cell. 2001; 104:503-16.
10. Libby P. Inflammation in atherosclerosis. Nature. 2002; 420: 868-74.
11. Hansson GK. Inflammation, atherosclerosis, and coronary artery disease. N Engl J Med. 2005; 352: 1685-95
12. Hauptman P. Medication adherence in heart failure. Heart Fail Rev. 2008; 13: 99-106.
13. Rosamond W, Flegal K, Furie K, Go A, Greenlund K, Hass N, *et al.* Heart disease and stroke statistics-2008 update: A report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Circ. 2008; 117:e25-146.

14. Yusuf S, Hawken S, Ounpuu S, Dans T, Avezum A, Lanas F, *et al.* Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries. Lancet. 2004; 364: 937-52.
15. Carleton RA, Bazzarre T, Drake J, Dunn A, Fisher J, Grundy SM, *et al.* Report of the Expert Panel on Awareness and Behavior Change to the Board of Directors, American Heart Association. Circ.1996; 93: 1768-72.
16. Corti R, Fuster V, Badimon JJ. Pathogenetic concepts of acute coronary syndrome. J Am Coll Cardiol. 2003; 41: 7-14.
17. Wood D. The treatment potential in preventive cardiology. Atheroscler Suppl. 2005; 2: 3-8.
18. Eagle KA, Kline-Rogers E, Goodman SG, Gurfinkel EP, Avezum A, Flather MD, et al. Adherence to evidence-based therapies after discharge for acute coronary syndromes: An ongoing prospective, observational study. Am J Med. 2004; 117: 73-81.
19. World Health Organization. Adherence to long-term therapies-evidence for action. Geneva (CH): World Health Organization. 2003. [cited 2010 Jul 25]. Available from: http://whqlibdoc.who.int/publications/2003/9241545992.pdf.
20. Julie AG, Sunil K, Michael JM, Katharina VE, Junling R, Kimberly R. Factors associated with medication refill adherence in cardiovascular-related diseases. J Gen Intern Med. 2006; 12: 1215-21.
21. Berra K, Klieman L, Hinohara A. Promoting adherence to medical and lifestyle interventions for women with cardiovascular disease. Curr Cardiovasc Risk Rep. 2009; 3: 197-204.
22. Ho PM, Spertus JA, Masoudi FA, Reid KJ, Peterson ED, Magid DJ, et al. Impact of medication therapy discontinuation on mortality after myocardial infarction. 2006. Arch Intern Med; 166: 1842-47.
23. Sokol MC, McGuigan, KA, Verbrugge RR, Epstein, RS. Impact of medication adherence on hospitalization risk and healthcare cost. Med Care. 2005; 43(6): 521-53.
24. Morisky DE, Ang A, Krousel-Wood M, Ward HJ. Predictive validity of a medication adherence measure for hypertension control. Univ. California Los Angeles. 2008. [cited 2010 May 12]. Available from: http://escholarship.org/uc/item/3m37z2jc.
25. Bokhour BG, Berlowitz DR, Long JA, Kressin NR. How do providers assess antihypertensive medication adherence in medical encounters? J Gen Intern Med. 2006; 21: 577-83.
26. Pamboukian SV, Nisar I, Patel S, Gu L, McLeod M, Costanzo MR, et al. Factors associated with non-adherence to therapy with warfarin in a population of chronic heart failure patients. Clin Cardiol. 2008; 31: 30-4.
27. Monane M, Bohn RL, Gurwitz JH. Compliance with antihypertensive therapy among elderly medical enrollees: The roles of age, gender and race. Am J Public Health. 1996; 86: 1805-8.
28. Balkrishman R. Predictors of medication adherence in the elderly. Clin Ther. 1998; 20: 764-71.
29. Berra K, Klieman L, Hinohara A. Promoting adherence to medical and lifestyle interventions for women with cardiovascular disease. Curr Cardiovasc Risk Rep. 2009; 3: 197-204
30. Sakthong P, Chabunthom R, Charoenvisuthiwongs R. Psychometric properties of Thai version of 8 item Morisky Medication Adherence Scale in patients with type-2 diabetes. Ann Pharmacother. 2009; 43: 950-7.
31. Iskedjian M, Einarson TR, MacKeigan LD, Shear N, Addis A, Mittmann N, *et al.* Relationship between daily dose frequency and adherence to antihypertensive pharmacotherapy: Evidence from a meta-analysis. Clin Ther. 2002; 24: 302-16.
32. Chutharath K, Paungphen C. Relationships between personal factors and social support with self-care abilities at home of chronically ill patients. [thesis]. Bangkok (TH): Chulalongkorn Univ.; 1992.
33. Supaporn N, Orasa P. Factors related to medication adherence among persons with hypertension. [thesis]. Bangkok (TH). Mahidol Univ.; 2004.
34. Skelding PC, Majumdar SR, Kleinman K, Warner C, Salen-Schatz S, Miroshnik I, *et al.* Clinical and non-clinical correlates of adherence to prescribing guidelines for hypertension in a large managed care organization. J Clin Hypertens. 2006; 8(6): 414-9.
35. Van Servellen G, Chang B, Garcia L, Lombardi E. Individual and system level factors associated with treatment non-adherence in human immunodeficiency virus infected men and women. AIDS Patient Care STDS. 2002; 16: 269-81.

ปัจจัยทำนายพฤติกรรมการรับประทานยาในผู้ป่วยโรคหัวใจและหลอดเลือดในระดับปฐมภูมิ

ปชาณัฏฐ์ ตันติโกสุม, ยุพิน อังสุโรจน์, ชนกพร จิตปัญญา

บทคัดย่อ: พฤติกรรมการรับประทานยาในผู้ป่วยโรคหัวใจและหลอดเลือดถือว่าเป็นพฤติกรรมส่วนบุคคลที่สำคัญอันส่งผลต่อการบริหารจัดการต่อโรค ลดอัตราการตาย และความสำเร็จในการดูแลสุขภาพ อย่างไรก็ตาม ประเทศไทยยังมีการศึกษาเพียงเล็กน้อย ดังนั้น วัตถุประสงค์การศึกษาวิจัย ก) เพื่อหา ความสัมพันธ์ของปัจจัยส่วนบุคคล (อายุ เพศ สถานภาพ และระดับการศึกษา) จำนวนโรคความเจ็บป่วยอื่นนอกหนือจากโรคหัวใจและหลอดเลือด จำนวนยาที่รับประทานในแต่ละวันและพฤติกรรมการรับประทานยา ข) เพื่อศึกษาปัจจัยทำนายของปัจจัยส่วนบุคคล (อายุ เพศ สถานภาพ และระดับการศึกษา) จำนวนโรคความเจ็บป่วยอื่นนอกหนือจากโรคหัวใจและหลอดเลือด จำนวนยาที่รับประทานในแต่ละวันและพฤติกรรมการรับประทานยา การศึกษานี้เป็นวิจัยแบบตัดขวาง (Cross Sectional Design) โดยกลุ่มตัวอย่างคือ ผู้ป่วยโรคหัวใจและหลอดเลือด จำนวน 160 คนที่ได้จากการสุ่มอย่างง่ายจากกลุ่มที่มี คุณสมบัติตามที่กำหนดในโรงพยาบาลระดับปฐมภูมิของ ประเทศไทย เครื่องมือที่ใช้คือ แบบสอบถามข้อมูลทั่วไปซึ่งพัฒนาโดยผู้วิจัย และแบบประเมิน MMAS ฉบับภาษาไทย ข้อมูลที่ได้นำมาวิเคราะห์ทางสถิติ ประกอบด้วยการวิเคราะห์ข้อมูลเชิงบรรยาย การหาความสัมพันธ์โดยเพียร์สัน (Pearson's) แกรมม่า (Gamma's) ฟี เคมเมอร์วี (Phi-Cramer's V) และวิเคราะห์การถดถอยหลายลำดับชั้น (Hierarchical multiple regression)

ผลการศึกษาพบความสัมพันธ์เชิงผกผันอย่างมีนัยสำคัญทางสถิติระหว่าง จำนวนโรคความเจ็บป่วยอื่นนอกเหนือจากโรคหัวใจและหลอดเลือด กับพฤติกรรมการรับประทานยา ผลการวิเคราะห์ความสัมพันธ์การถดถอยหลายลำดับชั้น พบว่า จำนวนโรคความเจ็บป่วยอื่นนอกเหนือจากโรคหัวใจและหลอดเลือด การศึกษาในระดับมัธยมและ เพศชาย สามารถร่วมกันทำนายพฤติกรรมการรับประทานยาได้ ร้อยละ 16.3 ซึ่งผลการศึกษาสามารถนำไปใช้เป็นข้อมูลการส่งเสริมพฤติกรรมการรับประทานยาในผู้ป่วยโรคหัวใจและหลอดเลือดที่ได้รับการดูแลในระดับปฐมภูมิต่อไป

Pacific Rim Int J Nurs Res 2011 ; 15(4) 278-287

คำสำคัญ: พฤติกรรมการรับประทานยา, ผู้ป่วยโรคหลอดเลือดหัวใจ, ระดับปฐมภูมิ

ติดต่อที่ : ปชาณัฏฐ์ ตันติโกสุม, *RN, PhD (Candidate) คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนนีศรีศตพรรษ เขตปทุมวัน กรุงเทพฯ ประเทศไทย 10330* ***E-mail:*** *pachanut.t@chula.ac.th*

ยุพิน อังสุโรจน์, *RN, PhD. รองศาสตราจารย์ คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กรุงเทพฯ ประเทศไทย*

ชนกพร จิตปัญญา, *RN, PhD. ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กรุงเทพฯ ประเทศไทย*