# Problems in Managing High Blood Pressure among Hypertensive Older Adults and Roles of Its Caregiver: A Qualitative Study

# Masalah-masalah dalam Penatalaksanaan Tekanan Darah Tinggi pada Lanjut Usia dan Peran-peran Pengasuh Utamanya (Caregiver): Sebuah Studi Kualitatif

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#### Abstract

A caring nursing relationship with hypertensive clients at their homes can have positive effects upon their blood pressure. This paper attempts to reveal efforts of the hypertensive older adults and their caregivers in dealing the high blood pressure. This study shows that often older adults they do not realize they are having hypertension at first; accidentally they are diagnosed with hypertension when they seek help for other health problem. While the others realize that they are having hypertension after the screening program conducted by students or health professional.

Soon after the older adults realize they are diagnosed with hypertension, changing the risky behaviors, asking and searching information related the disease follows. However, often they neglect the disease management when they feel the disease symptoms disappear. Or still practicing incorrect management, such as improper medical regiment, irregular checking blood pressure till does not manage their high blood pressure at all. The common practices among the hypertensive are alternative medicine used, such as using herbs, holy water, or asking help from the traditional healer as well as the spiritual leader. Concerning older adult caregivers roles are as the main psychological and financial support for the older adults.

This study demonstrates various perspectives of older adults and caregivers problems and efforts in maintaining blood pressure within recommended level. This is very useful information for the health professional in caring the hypertensive older adult comprehensively according to their needs and their perspective.

Key words: hypertensive older adults, caregiver, hypertension management

### Abstrak

Artikel ini mengemukakan tentang persepsi dari lanjut usia dan pengasuhnya tentang usaha-usaha mereka untuk mengontrol tekanan darah tinggi yang dialami oleh para lanjut usia dirumah. Hasil dari penelitian dengan desain kualitatif dan wawancara sebagai tehnik pengumpulan data ini yaitu kebanyaan pada awalnya lanjut usia tidak menyadari bahwa mereka menderita tekanan darah tinggi, baru setelah mereka memeriksakan masalah kesehatan yang lainnya kepada tenaga kesehatan dan dicek tekanan darah tingginya, didapakan tekanan darah tingginya melebihi batas normal yang direkomendasikan. Sedangkan lanjut usia yang lainnya mengetahui kalau mereka menderita tekanan darah tinggi setelah ada program screening dari mahasiswa atau tenaga kesehatan yang lainnya.

Segera setelah lanjut usia mengetahui mereka menderita tekanan darah tinggi, maka merubah tingkah laku yang membahayakan kesehatan, bertanya dan mencari informasi yang berkaitan dengan penyakitnya adalah hal yang dilakukan oleh para lanjut usia tersebut. Akan tetapi masih banyak diantara lanjut usia tersebut yang melakukan penatalaksanaan yang kurang tepat, seperti penggunaan obat yang salah, tidak teratur mengontrol tekanan darah atau juga tidak melakukan apapun untuk mengontrol penyakitnya tersebut. Praktek yang sering dilakukan untuk mengontrol tekanan darah tinggi diantaranya yaitu lanjut usia menggunakan pengobatan alternative seperti dengan menggunakan tumbuh-tumbuhan, air suci, atau meminta pertolongan dari pengobat tradisional dan juga pemimpin agama. Tentang pengasuh anjut usia, mereka adalah pendukung secara psykologis dan juga financial.

Penelitian ini menunjukkan beberapa perspektif lanjut usia dan pengasuhnya tentang usaha-usaha yang dilakukan untuk mempertahankan kesehatan lanjut usia. Hal ini merupakan informasi yang sangat berharga bagi tenaga kesehatan dalam merawat lanjut usia dengan darah tinggi secara komprehensif dan berdasarkan kebutuhannya dan dengan memperhatikan perspective mereka.

Kata Kunci: Lanjut usia dengan hypertension, caregiver (pengasuh utama), manajemen hipertensi

#### Introduction

In Thailand, the number of older adults with non-communicable diseases has been rising. Among the chronic illnesses, hypertension is still the main non-communicable disease. Various research articles describe this situation. A study of Rungchang (2001) states the prevalence of hypertension in the population over 45 years of age is 40%. Moreover, it is obvious that the incidence of hypertension is higher than 50% in the population over 65 years of age. This is high, compared to other Asian countries. The incidence of hypertension in the adult population in countries such as Indonesia, Philippines, Korea, and Taiwan is 33%, 21%, 27%, and 33%, respectively. While according to the 1997 health examination survey, there are approximately 4 million hypertensive

people in Thailand and only 25% of them know they have the disease and only 50% of this group received proper treatment. Therefore, Ministry of Public Health of Thailand is concerned about and for which it has put efforts in to early detection, control, and prevention of hypertension and others cardiovascular diseases since 1996.

Concerning seriousness of this disease, hypertension can lead to stroke and damage organs such as kidney, brain, and retina, particularly in older adults. Previous experiences revealed that nursing caring should be more considered in this group. From the screening program conducted by the researcher found that 75% older adults in a village were suffering high blood pressure. Therefore, the researcher served home care for selected hypertensive older adults and a weekly hypertension clinic with the first year of master students. From the study indicated that the older adults were unable to manage the healthy lifestyles and medical regiment for their high blood pressure condition. They had been consuming unsafe foods, quitting the medication, and combining the traditional medication with allopathic medication without consultation health professional, and did not check the blood pressure regularly.

Regarding the problems above, hypertensive older adults need a service to promote the hypertension management to prevent further complication. Home care may be has benefit for those hypertensive older adults. For most older adults with hypertension do not need be hospitalized. Hypertension management is part of daily life that can be managed at client house such as lifestyles modification and pharmacologic management and the diagnosis of hypertension is also easy. Home care programs also have the potential to reduce health care costs while maintaining quality by maximizing the client and family's attainment for optimum functioning and self care.

Home care also complies with Thailand's National policies. The Ministry of Public Health of Thailand (2000) has developed several programs with emphasis placed on behavior modifications, screening tests, and educational campaigns regarding heart disease and hypertension in the community-based. In addition, involvement of the family in providing care for the older adult has been the main strategy of the National Long-term Plan for the Elderly in Thailand from 1986 to 2001. Continued in the Second National Plan for Older Persons 2002-2021 includes strategies on long-term care provisions which range from promotion to support informal care within the family. In the new health reform, Thai government encourages the participation of informal care within the family by a standard that Primary Care Unit (PCU) has to provide home visits, family health evaluation, and home health care ten to fifteen hours per week. 10

This study is part of the overall project on developing the nursing standard for home care for hypertensive older adult with the hypothesis that a standard has a significant in improving the quality of care. The high quality of care is a major aim of health care delivery system, and the nurse is often the primary player in ascertaining the quality of health because of the nature of the relationship between nurses and clients; nurses have more contact with clients than other health professionals. 11,12,13

Previous study indicated currently the home care practice lack of comprehensive care for hypertensive older adult and their caregiver. This is corresponding with Kruesathit (2001), she suggested that home care for the elderly should be well prepared for maximizing the outcome, as well as preparing the acceptable standard of home care. Another study on quality assessment of home care indicated the quality of home health care needs to be revised with her recommendation for setting a standard of practice and monitoring home health care to enhance the quality of the outcome. 14

In the past it was generally accepted that educators rather than practitioners set the standard for nursing care. However, this lead to unrealistic expectations and unachievable ideals of nursing care. <sup>12,15</sup> Kemp & Richardson suggested to ask the clients as customer health service what good care should constitute. <sup>12</sup> Contributions of clients to standard development will maximize the benefits of the standard in enhancing the quality of care for clients as receivers of the practice.

Congruent with purpose of the main project, this study is focused to explore the real problems of the older adults in managing their disease and also the contribution of caregivers in caring the hypertensive. Furthermore, exploring what good nursing care should contain is investigated in order the nurses consider when they are caring the hypertensive older adults.

# Methodology

Sampling and data analyze

This study was part of project on developing the nursing standard of home care for hypertensive older adult. This was a qualitative study. Location of this study was a sub-urban village named Daeng Yai Muang District Khon Kaen Province, 10 km to the south of Khon Kaen University, Thailand. The aims were to explore the real problems of older adult in managing their disease at home as well as the perspective of the caregiver in caring the hypertensive older adult, particularly for the hypertensive who was living in the rural community.

Both purpose and snowball sampling techniques were used. A number of individuals who were deemed by researcher as best able to meet the information need of the study, who were willing to reflect on their experiences were selected. There were five hypertensive older adults and their caregiver had participated in this study. Each older adult and its caregivers were interviewed at their home, after the researcher and interpreter made an appointment prior interview process. While a group discussion consisted of 10 older adults was employed to gain more understanding regarding the management high blood pressure at home.

The data were analyzed based on themes and reported descriptively.

#### Ethical Issues

A copy of the proposal and the interview guidelines was sent to the ethical committee of Khon Kaen University for their approval related to protection of human subjects. Evidence was supplied to indicate that no risks would be incurred by the participants taking part in this study and the client participants would gain some knowledge related to the management of hypertension at home.

Informed verbal consent and written consent was obtained from participant who took part in this study. Taking part in this study was voluntary and the participant had the liberty to withdraw along this study. However, participants were encouraged to take part in this study. The identity of participants was kept anonymous; instead, initials were used for presenting the data.

Language translation

Since the researcher was not Thai, however researcher had been staying in Thailand since 1 year prior the study, thus researcher had understanding about Thai culture and language. Researcher had been working with hypertensive older adults for one year a part of her courses in Community Nursing I, II, and III. However, language was still to be barrier to conduct the study, moreover for the local language and academic language. Thus, the language barrier needed to be surmounted for the researcher to undertake this study. To eliminate this barrier, an interpreter assisted the researcher along the study.

Findings

This study was located in Moo Song Daeng Yai Muang District Khon Kaen Province, 10 km to the south of Khon Kaen University. The age range of the participant was from 60 to 78 years. The duration of having hypertension was 3 to 10 years. The hypertensive older adults mainly were living with their family. The main caregivers of older adults were spouses and their children. In cases in which the children were caregivers, mainly the daughters or the daughters in law were the older adults' caregiver.

Below were the common issues recounted by the older adults living with

hypertension.

1.1

## (1) Initially diagnosed with hypertension.

Noticing symptoms was important for the older adults before seeing a health care professional for a diagnosis while others had no common signs or symptoms of hypertension at all such as headache or dizziness that could compel them to seek the help from health care professional. Only when the screening program was carried out, then they were diagnosed with hypertension. Or in other cases the older adults sought health service for health problems or sickness other than hypertension. But when the health care professional took blood a pressure measurement, it was found the older adults had high blood pressure.

When initially diagnosed with hypertension, most of the older adults received a medical regimen. At first the older adults accepted and followed the medical regimen as recommended by the health care professionals. However, the older adults still held personal beliefs about the curability of the disease. They perceived that hypertension was a curable disease and yet did not accepted the chronicity of the disease. They treated the disease as an acute disease. As consequence of this action, the older adults took medication for a short period and/or took the medication without changing their risky behaviors. The older adults quit medication after the symptoms disappeared or their blood pressure returned to normal. They would return for treatment just as the symptoms reappeared. As an older adult said:

I know that I have high blood pressure because master students came to my house three years ago to check my blood pressure. At that time, they told me that I had high blood pressure and suggested to see the doctor at the hospital. Soon after, my youngest son sent me to the doctor. And the doctor gave me pills, he said that those pills should be took as his suggestion for reducing my high blood pressure. He gave pills for ten days and he suggested I visit the doctor again. When I visited the doctor ten days later, they informed me that my blood pressure was normal, but he still gave me pills again and suggested regular follow-up. I felt healthy and my blood pressure was normal so I did not take the medication anymore and did not visit the doctor again.

# (2) Changing risky behaviors.

Through their experience being hypertensive, the caregivers and particularly the older adults sought and received information about hypertension. They gained knowledge about the disease by way of health education and consultation with the health care provider, personal relationships with other hypertensive persons, and from the mass media. This process directed the older adults to recognize the chronicity of the disease and led them to self-manage their illness. As one female older adult shared her experience in receiving the information about hypertension:

I go to temple almost everyday. In that place, many older adults were gathered and we start to talk about everything such as farming, season, the community problems, and also about the disease that we face. In this community many people have high blood pressure. And we talk about this disease....For myself, I asked the information about the high blood pressure from the doctors (in the hospital) or nurses (in health center).... I have been diagnosed with hypertension since three years ago and I know I have to care for myself and my disease. I am afraid what happened to my neighbor will also happen to me if I do not manage my condition. I neighbor fell down in bathroom and now he cannot move his hand and his foot well.

Along with increasing the knowledge of the older adults in managing the disease, they recognized the need to change the risky behavior. A female older adult said, "I do morning walking everyday around 100 meters. I go around 6 times, so it means a total of 600 meters. I do it because the doctor told me to do so and I am feeling better. My blood has good circulation if I do exercise.....and I am lucky because my family understands me, they manage food for me, reducing salt in the menu and choosing less fatty food. They add the ingredients in their own dish, if they want." While another hypertensive man said, "I stopped drinking beer and quit smoking after the doctor told me that I had high blood pressure. I follow the doctor instruction because I want live longer and healthily."

Besides intention to change the risky behaviors, many older adults faced difficulties in changing risky behaviors. As consequence, they changed some of their risky behaviors, but they were still performing some other risky behaviors. As an older adult woman said:

I have been fat for a long time. I know that this is not good for my health, but it is difficult for reducing my weight....and I do so little exercise. As you know, I am very busy with my work in the shop, from morning until evening. I don't have time to exercise like others. But I always try to keep healthy by managing my food, trying to reduce salt, consuming more vegetables, and seeing the doctor when I feel uncomfortable.

Another older adult informed that he had difficulty in managing his food. "My wife cooks for my family. I think it is not delicious if we do not put enough salt in food. My food is the same as my family eats, they do not separate food me....I eat a lot because I have to work in the field.....I know that I have to be concerned with my food, but it is difficult...."

# (3) Incorrect medical regimen.

Some older adults performed incorrectly in administrating the medical regimen. Some quit the medical regimen suddenly when they faced side effects or when the symptoms decreased. An older adult stated that she stopped taking medication because of the urination effects of the medical regimen. She stated, "I do not like to take medicine because it disturbs my sleep and my activity, I have to go to the restroom many times to urinate, so I stop taking medicine." Another the older adult explained that he took two kinds of antihypertensives at same time without seeking advice from a health care professional.

## (4) Alternative medication

Alternative medication was common among the hypertensive older adults. The older adults had experience taking more than one kind of alternative medicines. Some of them took the alternative medicines to replace the medical regimen and some of them who took medicine combined the medication. Herbs were commonly used by the older adults. They believed that some herbs could lower blood pressure, and had fewer side effects than the modern medicine had. A female older adult stated this concern.

I prefer to use herbs because I am afraid of side effects of medicine that the doctor had prescribed to me. I feel comfortable after I use this herb. It is easy to find. You can find it around this community. The taste also good just like tea, you can try it....My neighbors also use this herb. I know this herb from them when we discussed our high blood pressure. Before I used to take medicine from the doctor regularly, but now I take only this herb. I am satisfied with this herb.

Kafak mammuang or Loranthus penthandrus or a semi-parasite living in mango trees was commonly used by the hypertensive older adults in the community where researcher administered home care. They used leaves and twigs of Kafak mammuang. This herb was boiled in water and consumed as a glass of tea each morning. Caregivers searched for information about alternative medication for the older adults.

Another alternative medicine was in capsule form. It was difficult to observe the content of this medicine. The older adults took this medicine for their health. It had multiple functions according to the older adults' explanation. Other older adults used holy water, The older adults went to Buddhist monks asking praying for their health. The monk gave holy water for drinking or splashing on their body. This might be used because of psychological effects. The condition for did not take the traditional medicine included other health problems than hypertension and complying with the health care professional suggestion.

## (5) Psychosocial and spiritual

The older adults believed that hypertension was related to stress. They perceived that having stress could make the disease worse. Many hypertensive older adults stated their fear. They had fear about their future. They connected stroke with the end of hypertension. Thus, they tried to avoid stressful situations, reducing stress and keeping calm in order to maintain emotional stability.

The ways the older adults kept relaxed and maintained the psychosocial health were chatting and sharing their experience among the older adults and among the hypertensive people. Stating their difficulties to their family members was also common used by the older adults. The older adults also were aware of their spiritual needs. Trying to find the meaning of life, they could not escape from illness. Strengthen their spirituality was seen leading to accept their illness. This following statement demonstrated how the older adult handle stress and fulfill their psychosocial needs.

As human beings we need to socialize with one another, even for us (for the older adults). I am chatting with my neighbors and share friendship with them. I think friendship is important for us, because we can share our experience and our difficulties. Even when they can not help us, at least we have a place to talk, it will reduce our burden... I talk also with my family or my kids, but to have a friend is different, sometime we can talk to them about things more comfortably because we may have the same interest.

About the spirituality, this statement below gives a clear example: As I am Buddhist, almost everyday I go to temple in the evening and make merit by giving food to the monks every morning. I am getting older. I think it is time for me to get closer with Buddha. Praying can give me feeling peace and personal strength. I pray in temple as well as at home any time when I feel I need to pray, particularly before I sleep at night.

A caregiver suggested that it would be helpful if the nurses also provided psychological counseling to the older adults, since they thought that the older adults often had psychological problems or had stress, but they did not want to talk to them openly. For example:

I do not know why my mother does not want to do exercise again. She is silent and sleeping all day. Usually she does exercise everyday, walking around the house. I think that it is good if the nurses or doctor come to give psychosocial counseling to her. I have tried to approach her, but sometimes it is difficult.

## (6) Accessibility of health service

The older adults often found it difficult to access the health service because no transportation was available or because of their fragility. In some cases, this affected the disease management. The older adults then stopped to take medication or did not check their condition regularly. These following statements described this situation:

In this community there is no public transportation goes to the health center. The health center is around 4 kilometers from here. We have to walk or use a private vehicle to reach there. I can not walk far. So, I do not go to the health center to check my health. I check my health when the students (nursing students) come to this village because they provide blood pressure measurements for people in this community....Actually I can ask my son to send me to health center, but I feel reluctant to do so

# (7) Trusting relationship health care providers - patients

Trusting relationships could enhance their feeling free in asking questions and seeking information from health care providers. The older adults stated that when they visited hospital, the doctor seemed very busy, thus they felt reluctant to ask questions. One female older adult stated that she did not ask questions related to herb that she was taking because she was afraid the health care professional would blame her. She indicated that she felt free to ask questions to master students that came to village to provide outreach clinic because they were just like her daughter.

# (8) Caregiving

Concerning caregiving, caregivers were mostly the older adults' spouses and their children such as her/his daughter or daughter-in-law, Caregivers indicated that it was good to have nurses visited the older adults at home and check their health. Regarding caregiving, caregivers stated it was their duty to take care of the older adults.

Not all caregivers knew how to take care the older adults, especially if the older adults had many health problems. Many caregivers still perceived that the older adults' health problems would be better by taking medication from the physician without considering other aspects of the older adults, such as the nature of the older adult diseases and chronicity of the disease.

The older adults perceived that caregivers were important for them in their old age. They needed some one who could taking care of them, listening their uncomfortable feeling, giving psychosocial comfort, as well as giving financial support when they really need support. They were realized they were no longer able to work to get amount of money except a little, so the older adults said that had feeling safe when they lived with or nearby their caregivers.

#### Discussion

The purpose of this study was to gain a better understanding the problem and efforts in managing the high blood pressure That people who live in the rural communities. In this study I found that perception and illness management experiences among the participants with essential hypertension were embedded in a process of discovering more comfortable ways to live with the chronic state of hypertension. This result corresponded with the studies of Kirdphon<sup>16</sup> and Panpakdee<sup>17</sup>. In the early of diagnosed with hypertension, the older adults still hold the belief that hypertension was curable. As sequence of this inaccurate belief, the elderly would stop medication soon after they were feeling well. However, commonly the hypertensive did not stop in seeking information regarding their disease. Experimental knowledge gained as a result of learned and accumulated experiences in illness management promotes changes from lower to higher stages of self-care management. 16,17

The knowledge the elderly gained from many sources affected their behavior in managing the disease, such as more frequent to exercise, managing the low salt food, low fat, and stop to drink beer. However, food management seemed the most difficult for the elderly to manage since for most elders still lived with their family. Wherein they had no choices in preparing food for themselves, the food prepared was for the whole family members. As Kyngas informed that for most hypertensive compliance with the dietary restrictions was poorest.<sup>18</sup>

The hypertensive in this study mostly treated their disease by using modern medicine at first. Since they knew that the hypertension is a long-life disease, mostly the hypertensive would try the alternative medicine, such as herb. The elderly still held the belief that modern medicine had many side effect compared with alternative medicine they had. All respondent in this study used to try alternative medicine and most of them using the herb, called Kafak Mammpuang'. They perceived that by using alternative medicine would get more benefit, less side effect, and fewer prices. In this point, the nurses role is important that to assist the hypertensive get the best treatment from the health professional, however if the hypertensive elderly had selected their own treatment, the nurse should respect with the hypertensive choice, however, nurse still has role to assist the hypertensive to have free from unpredictable effect by medicine they have.

In conclusion, a transmission of perception about hypertension from episodic or curable to chronic illness was repeatedly described as an important process enabled hypertensive people to manage their condition appropriately or more comfortable. Learning experiences as well as informed knowledge that had occurred since participants became aware of their diagnosis were the significant conditions that helped participants change their views about hypertension. Although, it was not found in most other studies that people with hypertension engaged in the behavior of thinking positively about hypertension in order to accept its chronicity, this finding was supported in work done by Baker and Stern.

The hypertensive need a great support from their family, want to be listened when they have problem. The main psychosocial support as well as financial support was from the family or relatives. They helped the older adult in searching the information related the older adult disease, asking and finding the medication for the disease. The participants revealed feeling comfort when they lived nearby their caregiver. Beside the caregiver, the elderly perceived that spirituality could enhance their comfort. Therefore, visiting the temple, asking praying from the monk, drinking the holy water from the monk were the common practices among the people to comfort their self.

#### Conclusion

The conclusion from this study was mostly in the early of disease the hypertensive did not know they were hypertensive. Most of the hypertensive faced difficulty in managing the disease or often they did not care their disease appropriately. Wrong understanding, lack of information that it might lead lack of awareness might be reasons why the hypertensive did not manage their disease appropriately.

Beside using the modern medicine, the hypertensive elderly commonly used alternative treatment, although they were not sure of its effect. The common alternative used by the elderly were asking praying from the monk, drinking the holy water, and also herbs. The main caregiver role was as source of psychosocial support.

# Implication of Study Finding

This study has a number of implications for a change. A review of previous studies of hypertension showed that there was a need to explore perceptions and adaptive responses to the experiences of having hypertension among Thai people, especially those who lived in the rural communities. This study provides an understanding of participant perspectives toward their disease and illness management and thus offers more understanding of the psycho-socio-cultural context of health management. This knowledge can subsequently be applied by the providers to implement cultural sensitive care for Thai people with hypertension.

This study also helpful for the health care professional in assisting the elderly with hypertensive in recognizing and better management of their disease, thus the further effect of hypertension could be prevented such as stroke.

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## References

- Jitapunkul, S., Chayovan, N., & Kespichayawattana, J. (2002). Long-term provision for older persons in Thailand. Presented as The 5th ADRF general meeting, 2002 Bangkok, Thailand.:
- Department of Health Republic Indonesia. (2000). Indonesia health profile. Retrieved at July 2003. From: www.depkes.go.id/IND/PROFILDEP/IS2010/ perkembangan.html.
- National Institutes of Health, National Heart Lung and Blood Institute [NIH, NHLBI]. (2003). The Seventh Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. U.S. Department of Health and Human Service.
- Ministry of Public Health of Thailand. (2000). Thailand Health Profile 1999-2000. Retrieved August, 2003, from: <a href="www.moph.go.th/ops/thealth.44/">www.moph.go.th/ops/thealth.44/</a> index.eng.htm
- Buranakitjaroen, P. (2000). The detection, control and prevention of hypertension in Thailand. [Abstract presented in World Hypertension League (WHL) Regional Meeting in Beijing, China 9-12 October 2000]. Retrieved August 8, 2003. Available from: http://www.mco.edu/org/whl/pdfs/pdf\_yearbook/ 16\_pgs\_77\_82.pdf
- Khasanah, U. (2002). Applied Orem's self care theory in hypertension clients in Ban Daeng Yai Moo Song Tambon Daeng Yai Amphoe Muang Khon Kaen Province. Unpublished report for course 251 841 Community Nursing III in Master in Community Nursing, Faculty of Nursing, Khon Kaen University, Thailand.
- Lahdenpera, T.S., Wright, C.C. & Kyngas, H.A. (2003). Development of a scale to assess the compliance of hypertensive patients. *International Journal of Nursing Studies*, 40, 677-684.
- Rothman, N.L., Moriarty, L., Rothman, R.H., Silver, C., O'Connor, P.C., & Agvas, J. (1994). Establishing a home care protocol for early discharge of patients with hip and knee arthroplasties. *Home Healthcare Nurse*, 12 (1), 24-30.
- Hunt, R. (2001a). Continuity of care. In R. Hunt, Introduction to community-based nursing (2<sup>nd</sup> ed.). Philadelphia: Lippincott.
- Banchuin, C. (2002). New health insurance policy in Thailand. Ministry
  of Public Health Thailand. Retrieved September 13, 2003, from: http://
  www.adb.org/Documents/Events/2002/SocialProtection/
  banchuin\_paper.pdf
- Huber, D. (2000). Leadership and nursing care management (2<sup>nt</sup> ed.). Philadelphia: W.B Saunders...
- Kemp, N., & Richardson, E. (1995). Quality assurance in nursing practice (2<sup>nt</sup> ed.). London: Butterworth Heinemann.

- Promjan, N. (2002). The readiness for hospital accreditation of health personnel in general hospitals in the southern region of Thailand. Master Thesis in Public Health Nursing, Faculty of Graduate Studies, Mahidol University, Thailand.
  - Srisutthikamon, N. (2002). Quality Assessment of home health care in Khon Kaen region hospital. Master Thesis Abstract Community Nursing, Graduate School., Khon Kaen University, Thailand.
  - Nicholls, M.E. (1977). Factors affecting nursing standards at the practice level. In M.E. Nicholls & V.G. Wessells (Eds.), Nursing standards and nursing process. Massachusetts: Contemporary Publishing.
  - Kirdphon, W. (2003). Accepting and adjusting to chronicity of hypertension: a grounded theory study in Thai people. Doctoral thesis: University of Washington.
  - Panpakdee, O., Hanucharurnkul, S., Sritanyarat, W., Kompayak, J., & Tanomsup., S. (2003). Self-care process in Thai people with hypertension: an emerging model. Thai Journal Nursing Research, 7(2), 121-136
  - Kyngas, H.A., & Lahdenpera, T.S., (1999). Compliance of patients with hypertension and associated factors. *Journal of Advanced Nursing*, 29 (4), 832-839.