FACTORS PREDICTING HEALTH STATUS ON FAMILY CAREGIVERS OF DEMENTED ELDERLY PATIENTS

NAPAPHON RITTEEVEERAKUL

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF NURSING SCIENCE
(ADULT NURSING)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2005

ISBN 974-04-5604-9

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……………………….................
Miss Napaphon Ritteeveerakul
Candidate

……………………….................
Assoc. Prof. Saipin Kasemkitwattana
D.N.S.
Major-Advisor

……………………….................
Asst. Prof. Usavadee Asdornwised
Ph.D.
Co-Advisor

……………………….................
Asst. Prof. Rungnirun Praditsuwan
Co-Advisor

……………………….................
Assoc. Prof. Rassmidara Hoonsawat,
Ph.D.
Dean
Faculty of Graduate Studies

……………………….................
Assoc. Prof. Pongsri Srimoragot,
D.N.S.
Acting Chair
Master of Nursing Science
Faculty of Nursing

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was submitted to the Faculty of Graduate Studies, Mahidol University
For the degree of Master of Nursing Science (Adult Nursing)
on
8 February, 2005

………………………..................
Miss Napaphon Ritteeveerakul
Candidate

………………………..................
Assoc. Prof. Saipin Kasemkitwattana
D.N.S.
Chair

………………………..................
Assoc. Prof. Yupapin Sirapo-ngam
D.N.S.
Member

………………………..................
Asst. Prof. Usavadee Asdornwised
Ph.D.
Member

………………………..................
Assoc. Prof. Pongsri Srimoragot
D.N.S.
Member

………………………..................
Asst. Prof. Rungnirun Praditsuwan
M.D.
Member

………………………..................
Assoc. Prof. Rassmidara Hoonsawat,
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University

………………………..................
Assoc. Prof. Kobkul Phanchareonworakul,
Ph.D.
Dean
Faculty of Nursing
Mahidol University

ACKNOWLEDGEMENT

I would like to express my sincere appreciation and deep gratitude to Assoc. Prof. Dr.Saipin Kasemkitwattana, my major advisor, for her guidance, supervision, and encouragement throughout. I would like to thank Asst. Prof. Usavadee Asdornwised and Asst. Prof. Rungnirun Praditsuwan, my co-advisors, for their constructive suggestions, guidance, encouragement, attention, and assistance throughout this study.

I would like to express my appreciation to Assoc. Prof. Yupapin Sirapo-ngam and Assoc. Prof. Pongsri Srimoragot for their constructive suggestions and guidance.

I would like to express my appreciation to all participants and dementia patients at the Out Patient Department of King Chulalongkorn Memorial Hospial and the Prasat Neurology Institute. I am also thankful to the Directors of King Chulalongkorn Memorial Hospial and the Prasat Neurology Institute, Head nurses and the staff of two hospitals, for their co-operation and generous assistance.

I am particularly indebted to the King Chulalongkorn Memorial Hospital, for this further study opportunity and I wish to thank all my colleagues and my friends for their great assistance and support.

Finally, I am extremely grateful to my family, my sister and my friends in the faculty for their love, warmnest support, understanding, and encouragement in completeting this study.

Napaphon Ritteeveerakul

FACTORS PREDICTING HEALTH STATUS ON FAMILY CAREGIVERS OF DEMENTED ELDERLY PATIENTS

NAPAPHON RITTEEVEERAKUL 4536819 NSAN/M

M.N.S. (ADULT NURSING)

THESIS ADVISORS: SAIPIN KASEMKITWATTANA, D.N.S.,USAVADEE ASDORNWISED, Ph.D., RUNGNIRUN PRADITSUWAN, M.D.

ABSTRACT

The purpose of the study was to investigate the influence of amount of care, strain from direct care, communication problems, and rewards of caregiving on health status of family caregivers of elderly patients with dementia based on the conceptual framework of Lazarus and Folkman (1984). The subjects were 90 primary caregivers who took elderly patients with dementia to receive treatment at the out-patient department of King Chulalongkorn Memorial Hospital and the Prasat Neurology Institute between January to June 2004. The instruments used in data collection were composed of the demographic characteristics questionnaire, the amount of care questionnaire, the strain from direct care questionnaire, the rewards of caregiving questionnaire, the communication problems questionnaire, and the SF-36 health survey questionnaire. As for data analysis, descriptive statistics, Pearson's product moment correlation, and multiple regression analysis were employed.

The findings revealed that the family caregivers were between 24 and 78 years old (78.9%), with the average age of 51.82 years, were married (54.5%), held an undergraduate degree (32.3%), were Buddhists (94.5%), and were daughters of the elderly patients with dementia (47.8%). The main reason for performing caregiving was duty and responsibility (47.7%), and they spent an average of 12.78 hours per day providing care. Also, the subjects did not have any health problems before performing caregiving (60%), but close to three-quarters (73.3%) developed some form of health problem after caregiving including stress, anxiety, aching, moodiness, headache or dizziness, sleeplessness, and exhaustion. In addition, the subjects assessed the amount of care at a rather high level (mean = 46.16; SD = 10.36, Skewness = -.012), strain from direct care and communication problems at a rather low level (mean = 89.38; SD = 36.25, Skewness = 1.029 and mean = 7.52; SD = 4.23, Skewness = .845, respectively), and rewards of caregiving and health status at a rather high level (mean = 64.23; SD = 22.28, Skewness = -.487 and mean = 2467.89; SD = 506.398, Skewness = -.374, respectively). Both strain from direct care and communication problems were the predictors to influence health status of family caregivers' (R^2 = 27.4, $p <.05$)

Based on these findings, it is recommended that nurses should assess the health status of family caregivers, especially those who suffer from a health problem before performing their caregiving duty. Also, nurses should work collaboratively with family members and heatlhcare teams to reduce stress, promote communication skills, and offer consultation to family caregivers with a risk of health problem so as to enable family caregivers to maintain their health status and potential to effectively provide care to elderly patients with dementia.

KEY WORDS: AMOUNT OF CARE / STRAIN FROM DIRECT CARE /
REWARDS OF CAREGIVING / COMMUNICATION PROBLEMS/
HEALTH STATUS / FAMILY CAREGIVERS

106 P. ISBN 974-04-5604-9

ปัจจัยที่ทำนายภาวะสุขภาพของญาติผู้ดูแลผู้สูงอายุสมองเสื่อม (FACTORS PREDICTING HEALTH STATUS ON FAMILY CAREGIVERS OF DEMENTED ELDERLY PATIENTS)

นภาพร ฤทธิวีรกูล 4536819 NSAN/M
พย.ม. (การพยาบาลผู้ใหญ่)

คณะกรรมการควบคุมวิทยานิพนธ์ : สายพิณ เกษมกิจวัฒนา, พย.ด., อุษาวดี อัศดรวิเศษ, Ph.D., รุ่งนิรันดร์ ประดิษฐสุวรรณ, M.D.

บทคัดย่อ

วัตถุประสงค์ของการวิจัยครั้งนี้เพื่อศึกษาถึงอิทธิพลของปริมาณการดูแล ความเครียดจากการดูแล ปัญหาการสื่อสาร และรางวัลจากการดูแลต่อภาวะสุขภาพของญาติผู้ดูแลผู้สูงอายุสมองเสื่อม โดยใช้ทฤษฎีความเครียดและการเผชิญความเครียดของลาซารัสและโฟล์คแมนเป็นกรอบแนวคิดในการศึกษา กลุ่มตัวอย่างเป็นญาติผู้ดูแลหลักของผู้สูงอายุสมองเสื่อมจำนวน 90 รายที่มารับการตรวจรักษาที่แผนกผู้ป่วยนอกโรงพยาบาลจุฬาลงกรณ์และสถาบันประสาทวิทยา ระหว่างเดือนมกราคม พ.ศ. 2547 ถึงเดือนมิถุนายน พ.ศ. 2547 ผู้วิจัยเก็บรวบรวมข้อมูลด้วยตนเองโดยการสัมภาษณ์และให้ตอบแบบสอบถามข้อมูลส่วนบุคคลของญาติผู้ดูแลและผู้ป่วย แบบสอบถามปริมาณการดูแล ความเครียดจากการดูแล ปัญหาการสื่อสาร รางวัลจากการดูแล และแบบวัดภาวะสุขภาพของญาติผู้ดูแล วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา ค่าสัมประสิทธ์สหสัมพันธ์เพียร์สัน และการวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน

ผลการศึกษาพบว่า กลุ่มตัวอย่างส่วนใหญ่เป็นเพศหญิง (78.9%) มีอายุเฉลี่ย 51.8 ปี สถานภาพสมรส (54.5%) จบการศึกษาระดับปริญญาตรี (32.3 %) นับถือศาสนาพุทธ (94.5%) มีความสัมพันธ์กับผู้ป่วยในฐานะบุตรสาว (47.8%) เหตุผลการเข้ารับบทบาทผู้ดูแลมาจากหน้าที่และความรับผิดชอบ (47.7%)ใช้เวลาในการดูแลเฉลี่ย 12.78 ชั่วโมงต่อวัน ส่วนใหญ่ (60%)ไม่มีปัญหาสุขภาพก่อนการดูแล แต่พบว่ากลุ่มตัวอย่างส่วนใหญ่ (73.3%) มีภาวะเจ็บป่วยเกิดขึ้นในระหว่างเข้ารับบทบาทผู้ดูแล ภาวะเจ็บป่วยที่พบ ได้แก่ เครียด วิตกกังวล ปวดเมื่อยร่างกาย อารมณ์เสีย หงุดหงิด ปวดศีรษะ นอนไม่หลับ เหนื่อย อ่อนเพลีย กลุ่มตัวอย่างประเมินปริมาณการดูแลอยู่ในระดับค่อนไปทางสูงเล็กน้อย (mean = 46.16, SD. = 10.36, Skewness = -.012) มีความเครียดจากการดูแลและปัญหาในการสื่อสารอยู่ในระดับค่อนข้างต่ำ (mean = 89.38, SD. = 36.25, Skewness = 1.029;mean = 7.52, SD. = 4.23, Skewness = .845 ตามลำดับ) ขณะที่รางวัลจากการดูแลและภาวะสุขภาพอยู่ในระดับค่อนข้างสูง (mean = 64.23, SD. = 22.28, Skewness = -.487; mean = 2467.89, SD. = 506.398, Skewness = -.374 ตามลำดับ) ความเครียดจากการดูแลและปัญหาการสื่อสารร่วมทำนายภาวะสุขภาพของญาติผู้ดูแลได้ร้อยละ 27.4 อย่างมีนัยสำคัญทางสถิติ ($p < .05$)

จากผลการวิจัยมีข้อเสนอแนะว่า พยาบาลควรประเมินภาวะสุขภาพของญาติผู้ดูแลโดยเฉพาะผู้ที่มีปัญหาสุขภาพก่อนเข้ารับบทบาทเป็นผู้ดูแล วางแผนร่วมกับสมาชิกในครอบครัว บุคลากรทีมสุขภาพในการลดความเครียดจากการดูแล ส่งเสริมทักษะการสื่อสาร ให้คำปรึกษาแก่ญาติผู้ดูแลที่มีความเสี่ยงต่อการเกิดปัญหาสุขภาพ เพื่อส่งเสริมให้ญาติผู้ดูแลคงไว้ซึ่งภาวะสุขภาพที่ดีและมีศักยภาพในการดูแลผู้ป่วยได้อย่างมีประสิทธิภาพ

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CHAPTER I
INTRODUCTION

Background and Significance of the Study

At present, the number of elderly people in Thailand has rapidly increased as evidenced by the percentage of elderly people in the country that rose from 7.4% in 1990 to 10.3% in 2003 (Population and Society Research Institute, Mahidol University, 2003). It is expected that in the year 2020, the number of elderly people will reach 10 million or 14.7% of the total population (The National Statistics Office, 2003). This is due to advances in medical and nursing technology which makes care and treatment become more effective. Also, people have paid more attention to their health and self-care, so their longevity has increased.

Old age is a period of time when individuals experience considerable changes in their physical, mental, emotional, and social well-being, all of which begin to deteriorate. They tend to face with more health problems, especially chronic illnesses. It is found that as high as 80% of elder people have more than one chronic illness (Eliopolos, 2001), and dementia is one of the most important illnesses of these elderly people (Adelman & Daly, 2001; Pantumjinda, 2000; Tabmanee, 1998). In developed countries, the prevalence of dementia is 2 to 4% (American Psychiatric Association, 1995; Ruangtrakul, 1999), and the rate increases to 25-30% in those who are 85 years old and older (Gutterman, Markowitz, Lewis, and Fillit, 1999). Dementia is the fourth cause of mortality of the population in developed countries (Wise, Gray, and Seltzer, 1999). As for Thailand, the prevalence rate of dementia is 3-4% (Bhodisiri, 2001). Dementia ranks tenth among the significant health problems which result in morbidity in elderly population (Jitapunkul, 1999) and it is the fifth cause of mortality among elderly people (Registration Statistics, Neurology Institute, 2002). Thus, it can be concluded that dementia has become a more important problem and will continue to be so in the future.

Dementia is a group of abnormalities which are caused by deterioration of brain function, due to either old age or pathological conditions of the brain. This leads to a group of neurological and mental symptoms, including chronic loss of brain functions. The most commonly found dementia condition is Alzheimer's disease, which accounts for 40-70% of the patients with dementia. Second comes vascular dementia, which is found among 7-10% of the cases (Pantumjinda, 2000). More than half of the patients with dementia cannot be completely cured, and the treatment aims at prolonging the patients' condition or slowing down the progress. It has been found that elderly patients with dementia have impaired memory, perception, and learning, and have trouble doing activities, making decisions, using a language, performing daily life activities, interacting with others, using social skills, and having improper behavioral expressions (Gerdner, Buckwalter, and Reed, 2002; McGuire, and Cavanaugh, 1992). These symptoms increase in their severity and make elderly patients unable to take care of themselves. In fact, they will become reliant and require constant care from caregivers, especially when the condition progresses. Most of the care is given at home (Baumgarten et al., 1992; Clark, and King, 2003; Narayan, Lewis, Tornatore, Hepburn, and Corcoran, 2001).

Thailand has undergone a change in social structures. The number of extended families decreases, but the number of nuclear families increases. At the same time, social services, both from the public and the private sectors for elderly patients with dementia are rather limited. On top of this, the new policy of the government promotes caregiving among family members. Therefore, individuals who have to accept the role of caregivers of elderly patients with dementia are mostly family members including spouses, children, grandchildren, or close relatives (Boonrayong, 2000; Rakhanam, 2000; Sasat, 1998; Suwanno, 1995; Tangchoorat, 2001; Tiamdao, 1997). Performing the role of a family caregiver of dementia patients means an increase in duties and responsibilities, and family caregivers need to learn how to give care and to adjust their previous responsibilities. Providing care to elderly patients with dementia is a long-term process, as the disease gradually progresses and the patients may be able to live up to eight or ten, or even 20, years after diagnoses (Alzheimer's Association, 2002 cited in Long, and Dougherty, 2003). The longer the disease proceeds, the more care the patients need. Some family caregivers have to quit their job to take care of the patients, and this adversely affects living patterns of family caregivers regarding personal activities, rest and relaxation, and interactions with others (Archbold, 1983; Puwarapanich, 1995). This can separate family caregivers from society, and they may find themselves living under continuous pressure (Hoyert, and Seltzer, 1992). Family caregivers may experience exhaustion, and their physical and mental conditions can be affected (Pratt, Schmall, Wright, and Cleland, 1985). It can be seen that family caregivers are hidden patients and they are victims of stress (Stevenson, 1990).

One of the most important causes of stress of family caregivers is difficulty of care. They have to look after the patients' daily life activities including eating, taking a shower, getting dressed, using the toilet, resting, as well as observing symptoms and watching out for possible accidents such as falling down or getting lost. They also need to cope with and find ways to solve problematic behaviors of the subjects (Gerdner et al., 2002) including being demanding, restless, unable to control their emotions, screaming, or hiding things. These can cause family caregivers worry, irritability, and boredom, which make them feel that their responsibility is heavy and stressful. At the same time, family caregivers need to spend considerable energy and time in performing their role, and they do not have enough time for themselves to rest, exercise, or have activities with family or social circles, making them feel isolated and under chronic stress. Thus, their health can adversely be affected. They tend to have headache, exhaustion, and depression (Baumgarten et al., 1992; Hooker et al., 2002), and they may experience changes in their immune system (Kiecolt-Glaser, Dura, Speicher, Trask, and Glaser, 1991) and their vascular system. For this reason, it is often the case that caregivers of dementia patients suffer from respiratory diseases or hypertension (Baumgarten et al., 1992).

Another cause of stress of family caregivers of dementia patients is difficulty in communicating with the patients. Dementia makes the elderly patients lose their ability to communicate, to use the language, and to speak, so they are unable to make themselves understand or convey their needs. Family caregivers may need to guess the patients' words, and this requires a great deal of both patience and time. At the same time, dementia patients themselves are unable to understand caregivers, so family caregivers need to speak very slowly and take time explaining things to the patients. In addition to this, as the patients have problems with their memory and become forgetfulness, successful communication between family caregivers and elderly patients with dementia is even more difficult to achieve (Hendryx-Betalov, 2000). Family caregivers have to repeat their answers all the time, and this may be irritating or boring to them. Furthermore, elderly patients generally suffer from hearing, seeing, and perceiving impair, communication can even be more problematic. This can considerably affect family caregivers' mental conditions, making them bored, irritated, uneasy, and stressed. It can also cause physical conditions such as exhaustion (Boonrayong, 2000; Williams, 1993). Stress and exhaustion resulting from providing care can affect family caregivers' physical health.

Even though stress caused by communication can negatively affect health conditions of family caregivers and quality of care, previous research revealed that a large number of family caregivers of dementia patients have indicated positive results of caregiving (Archbold, Stewart, Greenlick, and Harvath, 1990; Narayan et al., 2001). Some family caregivers point out that providing care improves the relationship between them and the patients, and it also makes them better understand the process of the disease and aging (Hinrichsen, Hernandez, and Pollack, 1992). Moreover, most of the family caregivers state that providing care to the patients gives them an opportunity to show love, attachment, and gratefulness to the patients and undergoing sufferings together as a husband and wife or as parent and child makes them happy. At the same time, they feel their self-worth as they are capable and they live their lives to be useful and helpful to others (Gwi-Ryung Son, and Jaclene, 2003; Sasat, 2001; Unnapirak, 1999). Also, providing care to elderly patients enables them to be praised and respected by others. These are positive outcomes of caregiving, making family caregivers feel that they have reaped the reward for their care and be happier and less stressed (Boonrayong, 2000; Sasat, 1998; Gwi-Ryung Son, and Jaclene., 2003). This helps reduce their depression and boredom, enabling family caregivers to continue providing quality care to the elderly patients.

In other countries, studies on factors influencing stress and health status of family caregivers of dementia patients have been widely conducted. In Thailand, however, there are not many studies on this particular topic. In particular, there is no research study which specifically examines the relationships between amount of care, strain from direct care, communication problems, and rewards of caregiving and health status of family caregivers of dementia patients. In addition to this, cultures and closeness between elderly patients and family caregivers in Thailand and in other countries are different. As such, the researcher was interested in studying those factors. It was anticipated that the findings of this study could be beneficial in assessing and predicting risks of health problems of family caregivers, leading to provision of assistance or promotion of family caregivers' health, which, in turn, results in quality care of dementia patients.

Conceptual Framework

The theory of stress and coping of Lazarus and Folkman (1984) was used as a conceptual framework of this study. According to Lazarus and Folkman, stress is a result of a relationship between individuals and their environment. Individuals pull out resources available to adapt themselves to the fullest, or even beyond their capability. Whether the situation that individuals are facing will be judged as stressful or not depends on an assessment of balance between demands and resources available to those individuals. Assessing a situation as stressful requires a cognitive appraisal of the situation as follows:

Primary appraisal is the appraisal of the situation individuals are facing—how it is related to individuals and how it can affect them. If the situation is appraised as irrelevant or positive, individuals will not experience stress. However, whenever individuals appraise that the situation is negatively related to them, threatening, damaging, or challenging, stress can result. The level of stress individuals have depends on individual factors including obligation, belief, or intellect, as well as situational factors such as severity, uncertainty, and difficulty in making a prediction of the situation.

Secondary appraisal is the appraisal of resources and options in coping with stress. In dealing with the stress that has taken place, individuals appraise the situation in different ways. When they feel that the situation is the cause of stress, they can use two methods to cope:

1. Problem-focused coping is a stress coping technique which can be done by adjusting themselves or improving the situation by dealing with the cause of stress and analyzing possible solutions realistically.

2. Emotion-focused coping is an adjustment of emotions or feelings to relieve the sufferings using such techniques as denial, refusal, or blaming others.

At the same time, individuals can have reappraisal which is changing the primary and secondary appraisals after receiving new information or giving a new meaning to the same situation. Therefore, appraisal affects the effectiveness of coping. If individuals can effectively cope with stress, they can adjust themselves—somatic health, morale, and social function.

In the cases of elderly patients with dementia, the amount of care is a factor of the severity of the situation which reflects the activities and burdens family caregivers have to undergo to satisfy the needs of elderly patients. In providing care to elderly patients with dementia, family caregivers have to assess the caregiving situation simultaneously positively and negatively. It is a cause of stress, as family caregivers have to face difficulty in providing care and communicating with the patients, forcing them to make full use of resources in adaptation. If family caregivers are unable to cope with stress effectively, they may experience emotional responses such as anxiety, desperation, boredom, anger, and depression (Sasat, 1998; Schulz, O'Brien, Bookwala, and Fleissner, 1995), or physical responses including exhaustion, loss of energy, sleeplessness, body aches, and backache (Natechange, 2002; Navarat, 2002; Thongcharoen, Unnapiruk, and Petchpunsri, 2003). This can affect family caregivers' health status and physical illnesses may follow including stomach ulcer, respiratory diseases, and hypertension (Sasat, 2001; Tangchoorat, 2001). On the contrary, if family caregivers appraise the situation as positive or rewarding, it will lead to satisfaction with care, reduced stress, and positive health status. In other words, family caregivers will be happy and have spiritual morale to continue providing care. (Archbold et al., 1990; Cha-um, 1994; Gwi-Ryung Son, and Jaclene, 2003; Kopachon, 2002; Narayan, 2001; Sangboon, 2002; Sasat, 2001; Suwanno, 2001).

Based on the stress and coping theory and existing research on health status of family caregivers, the researcher applied the conception of stress and coping proposed by Lazarus and Folkman with the conception of research proposed by Fawcett and Downs (1992) which is a conceptual-theoretical-empirical structure, to link the concepts with variables and research instruments. That is, family members who had become caregivers of elderly patients with dementia had to encounter caregiving situations which varied in the amount of care activities. Figure I illustrates family caregivers appraised the caregiving situation as stressful caused by difficulty in providing care and communicating and the family caregivers' appraisal of the situation as positive or rewarding to their health status, while Figure II shows the relationship between amount of care to the patients, strain from direct care or difficulty in providing care, communication problems with patients, rewards of caregiving and health status of family caregivers of elderly patients with dementia.

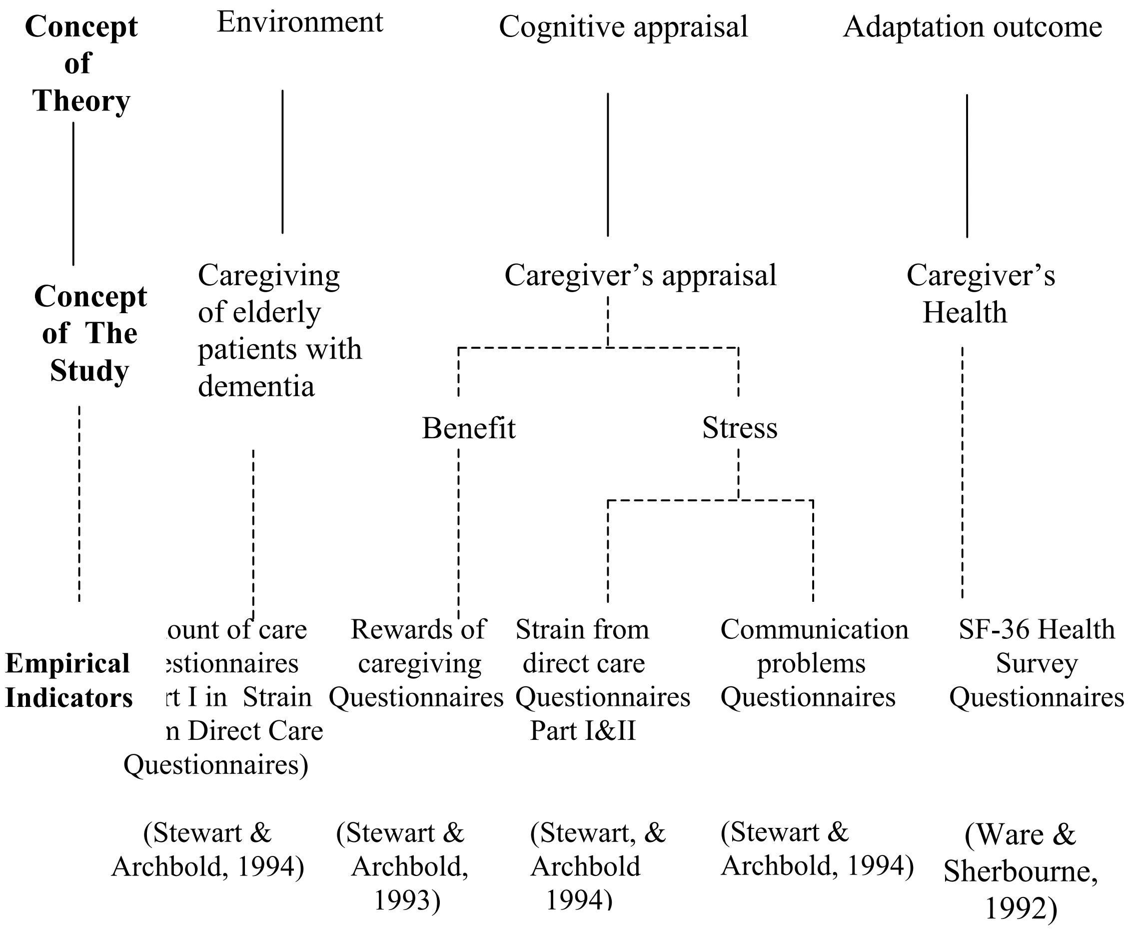

Figure 1: Conceptual-Theoretical-Empirical Structure of the Study (Applied from the Fawcett & Down's concept, 1992: 106)

---------- : indicating connections between theoretical concept and indicators

______ : proposition linking theoretical concept and study concept

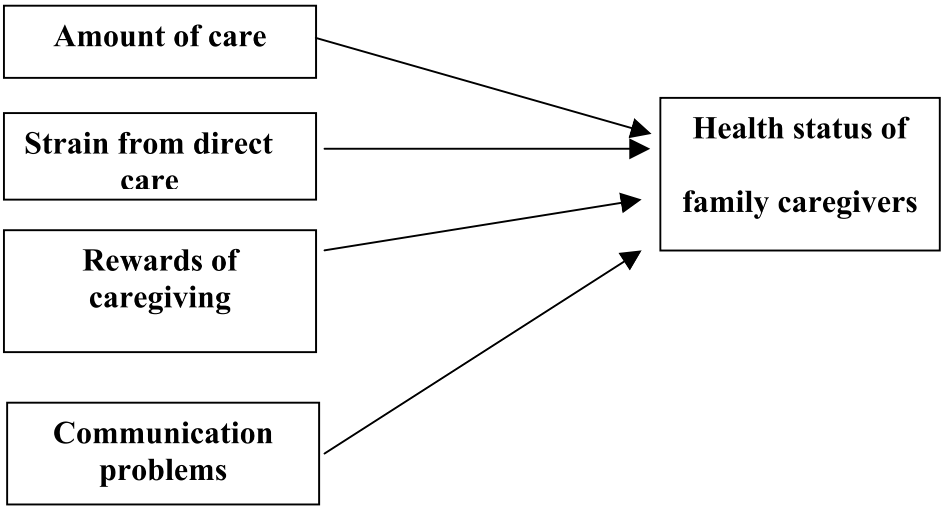

Figure 2: Theoretical Framework of the Study

Research Questions

1. What are amount of care, strain from direct care, rewards of caregiving, communication problems, and health status of family caregivers of elderly patients with dementia?

2. Can amount of care, strain from direct care, rewards of caregiving, and communication problems predict health status of family caregivers of elderly patients with dementia?

Purposes of the Study

1. To study amount of care, strain from direct care, rewards of caregiving, communication problems, and health status of family caregivers of elderly patients with dementia.

2. To determine the predictability of amount of care, strain from direct care, rewards of caregiving, and communication problems on health status of family caregivers of elderly patients with dementia.

Research Hypothesis

The amount of care, strain from direct care, rewards of caregiving, and communication problems can predict health status of family caregivers of elderly patients with dementia.

Scope of the Study

The present study aimed at investigating factors which could predict health status of family caregivers of elderly patients with dementia —amount of care, strain from direct care, rewards of caregiving, and communication problems. Data were collected from primary caregivers of elderly patients with dementia who sought treatment at the elderly clinic, neurological clinic, psychiatric clinic, and dementia clinic, at the Out-Patient Department of King Chulalongkorn Memorial Hospital, and the Prasat Neurology Institute. The duration of the study was between January to June 2004.

Expected Outcomes and Benefits

1. The findings of the study would enable healthcare team members to understand factors affecting health status of family caregivers of elderly patients with dementia. The findings could prove useful as information necessary in evaluating risks of health problems of these family caregivers, and they could shed light on how to develop nursing patterns to promote health of family caregivers of elderly patients with dementia.
2. The findings could also be used as guidelines in further research studies examining other factors related to family caregivers and elderly patients with dementia.

Definition of Terms

Amount of care refers to quantity of caregiving activities family caregivers perform for elderly patients with dementia. In the present study, it was assessed using the Amount of Care Questionnaire developed by Stewart and Archbold (1994), which was in the part I of the Strain from Direct Care Questionnaire.

Strain from direct care refers to the fact that family caregivers perceive that it is difficult to take care of elderly patients with dementia when doing different activities. In the present study, it was assessed using the part I and II of Strain from Direct Care Questionnaire developed by Stewart and Archbold (1994).

Rewards of caregiving refers to family caregivers' perceptions regarding positive feelings caused by providing care to the elderly patients with dementia in terms of meaning, spiritual , learning, being there, and financial. In this study, it was assessed by using the Rewards of Caregiving Questionnaire constructed by Stewart and Archbold (1993) as follows:

Rewards of Meaning —caregiving is good and makes life more meaningful.

Spiritual Rewards—caregiving is a good deed and will result in better life in the future.

Rewards of Learning—caregiving leads to learning, as well as better understanding of health condition and sickness.

Rewards of being there—caregiving is a good chance to help and live with the patients.

Financial Rewards—caregiving means occasional material gains in the form of objects, rewards, or money from other relatives.

Communication problems refer to problems in communication between family caregivers and elderly patients with dementia due to the pathology of the brain, making elderly patients have memory, listening, and speaking impair. This makes caregiving more difficult. In this study, communication problems were assessed with the Communication Problems Questionnaire of Stewart and Archbold (1994).

Health status of family caregivers refers to family caregivers' perceptions of their physical, mental, social, and functional health status, as assessed by the SF-36 Health Survey Questionnaire of Ware and Sherbourne (1986, 1992).

CHAPTER II

LITERATURE REVIEW

In this study, the related literature was reviewed in the following topics:

1. Dementia and problems found in elderly patients with dementia
2. The concepts of the family caregivers and their responsibilities
3. Impacts of caregiving activities on health status of family caregivers of elderly patients with dementia
4. Amount of care of caregivers and health status of family caregivers of elderly patients with dementia
5. Strain from direct care and health status of family caregivers of elderly patients with dementia
6. Rewards of caregiving and health status of family caregivers of elderly patients with dementia
7. Communication problems and health status of family caregivers of elderly patients with dementia

Dementia and Problems Found in Elderly Patients with Dementia

Dementia is not a disease. In fact, it is a group of neurological symptoms which are caused by functional abnormality in the cerebral cortex or related neurons. This makes the patients lose both short-term and long-term memory, and it can be accompanied with deterioration in personality, decision making, abstract thinking, use of languages, and movement skills. These symptoms caused by dementia are patients' obstacles in daily living in society. (Puangwarin, 1994; Srikiatkajorn, 1990)

Dementia can be categorized according to groups of symptoms as follows (Pantumjinda, 2000):

1. Categorization according to causes:

1.1 Primary dementia is caused by abnormality or degeneration of brain cells which causes are not yet clearly known. This includes Alzheimer's, Pick, Huntington, etc. There is no specific treatment, so this group of dementia is incurable.

1.2 Secondary dementia results from different known diseases. In other words, it is a result of other physical illnesses which affect the function of the brain such as cerebrovascular diseases, infectious diseases, diseases related to metabolism, diseases caused by toxicity of food and medicine, and others, all of which can be cured.

2. Categorization according to clinical characteristics divided based on the pathology of the brain:

2.1 Cortical dementia shows symptoms similar to those of the disease of the cerebral cortex, especially during the first phases of the condition. The symptoms include abnormality in language use, loss of concentration, loss of both long-term and short-term memory, inability to name, loss of ability to work, loss of ability to get dressed, inability to remember surrounding environment, and inability to adjust to the environment. During the later stages of the condition, symptoms include abnormality in walking, tightness of muscles, inability to speak clearly or inability to speak at all, and other neurological abnormalities. This includes Alzheimer's and Pick disease.

2.2 Subcortical dementia involves loss of the function of the cerebral cortex which is more widespread than that of cortical dementia. The loss may not be severe, and the symptoms shown include slower actions and thoughts, less attention, forgetfulness, etc. The most frequently found symptom is depressive mood. This group of dementia includes Parkinson's in the late stage and Cerebral contusion, and others.

The major causes of dementia in elderly patients are Alzheimer's disease and vascular dementia (Ruangtrakul, 1999).

The severity of dementia can be divided into three phases as follows (Pantumjinda, 2000; Hendryx-Bedalov, 2000; Rempusheski, and Hurley, 2000):

1. Mild dementia—The patients begin to experience clearly impair functions in work and society. However, they are still able to take care of themselves when

performing routine activities and perform self-care. They have little forgetfulness, and they may experience some inability to solve problems in daily life.

2. Moderate dementia—The patients are able to help themselves less and need assistance from others. It is obvious that they have lost their memory and have disorientation when it comes to date, time, and place. They lack perception of what they should do, become unable to solve problems, have trouble sleeping, and experience sleeplessness. If they are left alone, it may be dangerous for them.

3. Severe dementia—The patients are unable to take care of themselves even when doing daily life activities. They have difficulty swallowing food, moving, and remembering. They are very disoriented and do not know date and time. They may also experience depression and inability to make decisions or solve problems. Most of the patients in this stage cannot communicate intelligibly and are unable to control bowel movement. They may need to be on the bed all the time, and they require constant care from others.

At present, more than half of dementia with a known cause cannot be completely cured. In most of the cases, the doctors prolong the progress of dementia and try to prevent complications and disability that may occur including infection, aspiration, malnutrition, and others.

Problems Found in Elderly Patients with dementia

In general, elderly patients with dementia tend to experience and show the following symptoms (Pantumjinda, 2000; Rebok, and Folstein, 1994):

1. Intellectuality including memory, perception, and use of language. The very first and obvious sign of dementia is memory impairment. The patients tend to lose new memories such as appointment, while they can retain old memories. They also have learning impair such as forgetting the conversation and being unable to do activities they used to perform or complex activities. For example, they may be able to turn on the television but unable to change the channels, or they may be able to go to the toilet but unable to find the way back to their room. Furthermore, they lose abstract thinking and are unable to use reasons or logic. Their decision-making skills become impaired, as well as their use of language. They may stutter and cannot think of the names of objects or persons. They sentences are incoherent or unconnected. Finally,

they speak less and less until they stop speaking altogether. The severity of the symptoms depends on the severity of dementia.

2. Behavior: Elderly patients with dementia have changing behaviors which may affect family members such as aggressive behavior, extreme anger, agitation, wandering, and others. Some may become indifferent and lose interest in people or the environment. Elderly patients with dementia tend to show physical abnormalities such as trouble in sleeping. For instance, they may sleep during the day and wake up and become restlessness at night. They also have impairment in doing daily life activities including cleaning, getting dressed, using the toilet, and others, and they may lose their appetite and forget their own hunger. These symptoms only increase in severity.

3. Emotion: Emotional changes and mental abnormality tend to occur simultaneously with intellectual and behavioral changes, all of which eventually lead to helplessness. This makes elderly patients with dementia require continuing care from family members to server their various needs. (Blieszner, and Shiefflett, 1990; Marsh, Prochada, Pritchett, and Voju, 2000; Pantumjinda, G, 2000)

The Concepts of the Family Caregivers and Their Responsibilities

The term “family caregivers” refers to relatives or close persons who provide care to the patients at home. They can be fathers, mothers, husbands, wives, children, siblings, or friends, who provide care to the individuals who undergo changes caused by diseases, disability, or deterioration-physically, mentally, emotionally, and intellectually. These individuals experience limitations in doing their daily living activities and require specific treatment and care. The caregivers continuously satisfy these individuals’ needs and look after them without receiving wages or material gains. The caregiving situation takes place at home or in the community, not in a hospital or any other healthcare facility (Sirapo-ngam, 1996).

Besides this, family caregivers can further be divided according to the level of caring responsibility into two types: primary caregivers and secondary caregivers. Primary family caregivers provide direct care to the patients and emphasize different activities to server the patients’ physical and mental needs. They devote their time to provide continuing care to the patients more than any other persons and their care includes assistance in bowel movement, feeding, emotional support and others. On the other hand, secondary family caregivers are those who manage other things or provide indirect care. Their responsibilities include arranging transportation to the hospital or occasionally substituting the primary family caregivers when they are unavailable. They provide less care to the patients.

It can be concluded that family caregivers are family members or other close persons who provide care to individuals who have physical, mental, or emotional impairment and are unable to satisfy their own basic needs (Brodarty, and Green, 2000) and require continuing care in daily living activities, emotional and mental support, and physical condition. They provide care unpaid. In this study, family caregivers of elderly patients with dementia were studied.

The Responsibilities of the Family Caregivers of Elderly Patients with Dementia

As elderly patients with dementia are unable to take care of themselves due to physical, cognitive, or intellectual limitations or distorted behaviors such as forgetfulness, caregivers have to take charge of them. It can be said that the patients' needs are burdens or activities of family caregivers who are responsible for them, which can be summarized as follows (Wicheantong, 2000; Pantumjinda, 2000):

1. The elderly patients with dementia should know themselves and their environment as realistically as possible. They should be trained to ensure they know who they are, where they live, and what the date and time are. Family caregivers need to use question and answer technique or other techniques to make patients be in touch with the surrounding environment such as food intake, daily living, current time, etc. This requires a great deal of patience on part of the family caregivers as it may take a long time for the patients to think and find the answers.

2. As elderly patients with dementia forget things very easily, they need to be stimulated so that they can memorize things better. Family caregivers need to help stimulate their thinking by showing them old pictures and talking about them, reviewing how to use a watch or a calendar, or reminding the patients of date and time.

3. The elderly patients with dementia should be taken outside the house to exercise, which befits their physical and mental condition, especially those who are still physically healthy. The patients may not like staying home all the time in a

restricted area, so family caregivers should take them out once in a while. However, special care should be taken into consideration to ensure that the patients will not get lost. Also, the patients should carry an identification card with the patients' name, address, and other necessary contact information with them at all time.

4. As regards communication, the elderly patients with dementia may also be hearing impaired, so family caregivers need to make sure that the patients hear and understand what the family caregivers say by pronouncing words clearly, slowly, and loud enough. Furthermore, they need to give the patients time to think and respond, and they should reduce distracting noises in the surrounding as much as possible. Words and sentences should be simple and short, and they should be pronounced distinctly one by one. Repetition may be necessary if the patients do not understand what is said, and family caregivers need to show closeness by touching, holding hands, and having eye contact while talking to the patients as they are able to understand facial expressions and body language.

5. Family caregivers need to take care of the patients' activities of daily living and instrumental activities of daily living such as cleaning, dressing, eating, taking medicines, and using the toilet, as well as body movement. This is because elderly patients are unable to use different parts of the body to do activities as they might want, as well as have memory and understanding problems.

6. Family caregivers need to take care of the elderly patients with dementia according to their condition including dealing with aggressive behaviors and misunderstanding.

7. In terms of rehabilitation, elderly patients with dementia should be trained to be able to help themselves in daily living activities. Skills necessary in doing daily life activities should be trained and reinforced by family caregivers.

8. Family caregivers need to provide the elderly patients with emotional and mental support. They should take care of them with acceptance, understanding, and respect, and they should maintain a good relationship with elderly patients with dementia so that they will be able to retain their sense of self-worth.

9. Family caregivers need to take care of the surrounding environment to prevent complications caused by limitation in doing activities or having body movement. For example, rails may be installed on the wall to prevent elderly patients

with dementia from stumbling and falling down when walking or getting out of the toilet.

10. Activities at home should be arranged to make elderly patients with dementia enjoy themselves and do not feel lonely. Family caregivers need to stimulate them to make them feel like doing activities by themselves such as watching television, listening to music, having a religious activity, and exercising.

11. The elderly patients with dementia should be taken care of and make sure that they received correctly medication.

Impacts of Caregiving Activities on Health Status of Family Caregivers of Elderly Patients with Dementia

WHO has defined health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organization, 1947 cited in Edlin, Golanty, and Brown, 2000). Therefore, health involves physical conditions, such as pain or bodily function, mental conditions, emotional conditions, and social functions.

In caring for elderly patients with dementia, family caregivers have to take care of the patients' health, daily living activities, and spiritual support (Gerdner et al., 2002) to respond to their needs. Maintaining the role of family caregivers for an extended period of time can directly affect family caregivers' health conditions physically, mentally, and socially as follows (Grant, 1996; Hoyert, and Seltzer, 1992):

In terms of physical conditions, devoting their energy and mental power to provide close care to elderly patients with dementia for 24 hours a day means that family caregivers do not have much time life to take care of themselves. For example, they may not have time for physical check-ups, they skip meal times, and they lack rest and relaxation. This is because elderly patients with dementia have sleeping problems and get up during the night. Thus, family caregivers become exhausted. Reported physical effects experienced by family caregivers are headache, shortness of breath, faster heartbeat, chest pain with unknown cause, loss of appetite, and body aches caused by carrying or lifting the patients who have movement problems. These lead to deterioration in caregivers' health (Fredman, 2001). Deteriorating health eventually brings about a physical illness (Brodaty, and Hadzi-Pavlovic, 1990). It is found that family caregivers of patients with Alzheimer's disease have weakened immune system (Kiecolt-Glaser et al., 1991) and more stimulated hypothalamic-pituitary axis, which puts them at a higher risk of infectious diseases (Barringer, 1997 cited in Jonas et al., 1997). Some family caregivers experience sleeplessness and stress, and they have to use more psychotropic drugs (Motenko, 1989; Poulshock, and Deimling, 1984). In addition, it has also been discovered that stress causes an increase in sugar and fat in blood, leading to such diseases as peptic ulcer or hypertension (Sasat, 2001; Tangchoorat, 2001).

As for emotional and mental conditions, problems with memory and intellectuality make elderly patients with dementia unable to remember their family caregivers, as well as date, time, and place. Also, they undergo personality and behavior changes, so family caregivers have to assist them in doing different activities and solving behavioral problems. These can lead to changes in family caregivers' emotional conditions, and they may experience fear, anxiety, worry, anger, guilt, loss, boredom, confusion, and uneasiness (Fredman, 2001; Sasat, 1997). They can be under a high level of stress and have a low level of satisfaction in life (George, and Gwyther, 1986; Haley et al., 1987). It has been found that primary family caregivers of elderly patients with dementia have more depression than relatives who are not primary family caregivers (Baumgarten et al., 1992).

Regarding social condition, more burdens mean less chance for social activities or interactions with others (Kinney, Stephens, Franks, and Norris, 1995; Schmall, 2000). This affects family caregivers' relationships with other family members and their social circles (Grant, and Davis, 1996; Mastrian, Ritter, and Deimling, 1996; Narayan et al., 2001; Stevenson, 1990). Family caregivers may feel that they are isolated from others in the society.

It can be concluded that becoming family caregivers of elderly patients with dementia leads to various duties and responsibilities which cause stress and exhaustion, which in turn, can adversely affect family caregivers' physical, mental, and social conditions.

Amount of Care and Health Status of Family Caregivers of Elderly Patients with Dementia

As elderly patients with dementia undergo continuously deteriorating physical, mental, intellectual, and spiritual conditions, they require increasing attention and care from caregivers to satisfy their needs (Yang, and Kirchling, 1992). The activities family caregivers need to perform for them are looking after their health and assisting in daily living activities such as cleaning, dressing, eating, excreting, walking, moving (Natechang, 2002; Thongcharoen, et al., 2003; Sasat, 2001). They also need help in shopping for necessities, going to see the doctors or doing other errands (Anderson, Linto, and Stewart-Wynne, 1995; Grant, 1996; Marsh et al., 2000; McLean, Roper-Hall, Mayer, and Main, 1991; Young, and Kahana, 1989). Family caregivers have to bear these burdens, and their living patterns and social interactions are affected (Kaewraya, 1997; Kanechaiyawongse, 1996; Stevenson, 1990). Thus, they may become stressed, depressed, and bored with caregiving (Dennis, O'Rourke, Lewis, Sharpe, and Warlow, 1998).

In addition, it has been found that having to lift or carry elderly patients with dementia when walking, sitting, or standing up can affect family caregivers' physical conditions and cause backache, neck pain, and exhaustion (Thongcharoen, et al., 2003). This is in agreement with a study of Perkdetch (2002) which revealed that the amount of care provided to patients with cerebrovascular diseases was associated with stress of family caregivers ($r = .331$, $p < .01$), and it could explain the variance by 14.3%. Likewise, a study of family caregivers of elderly patients with dementia conducted by Sasat (2000) indicated that the patients' level of dependency was positively associated with family caregivers' stress ($r = 0.42$, $p < .01$).

Strain from Direct Care and Health Status of Family Caregivers of Elderly Patients with Dementia

In addition to burdens or activities family caregivers of elderly patients with dementia have to carry out to satisfy the patients' needs caused by impairment in doing various activities, family caregivers have to assist elderly patients with dementia in having social interactions and uplift their morale. They also need to make decisions regarding treatment and care and other financial matters. These needs may be difficult for family caregivers to respond to (Kuaprom, 1997), and they can be the major cause of family caregivers' stress.

Besides, deterioration in thinking and memory as well as forgetfulness can be another factor which causes a high level of stress (Blieszner, and Shifflet, 1990; Burns, Archbold, Stewart, and Shelton, 1993; Chou, LaMotagne, and Hepworth, 1999; Haley et al., 1987; Quayhagen, and Quayhagen, 1988; Sheehan, and Nuttal, 1988; Sasat, 2000). It has been found that some family caregivers are worried that the patients may wander outside their house and get lost, or that the patients may be in a harmful situation if they are out of sight of the family caregivers such as eating what is not food which can cause death. This requires a lot of time and energy on part of family caregivers. Thus, they have less time for themselves to rest, exercise, or participating in activities with family members and others in society. For this reason, family caregivers tend to experience headache, exhaustion, and sleeplessness. At the same time, they may feel that they are isolated from the rest of the society, leading to depression (Baumgarten et al., 1992; Clyburn, Stones, Hadjistavropoulos, and Tuokko, 2000; Schulz, O'Brien, Bookwala, and Fleissner, 1995; Zanetti et al., 1998).

Another burden which can cause stress is controlling and handling emotional or behavior problems of the patients. Elderly patients with dementia may have anxiety, depression, paranoia, anger, aggression, or childish behaviors such as refusing to cooperate in stimulating activities, refusing to get out of bed, or sleeping during the day and waking up during the night and becoming agitated and restless. They may also refuse to eat or take medication, cannot control bowel movement and urination, or strip in public. These are difficult for family caregivers to look after. Worse yet, the behaviors of the patients are unpredictable and uncontrollable, so family caregivers may become afraid, angry, or stressed, which can affect their satisfaction in life and happiness (Boonrayong, 2000; Gerdner et al., 2002; Haley, 1997; Sasat, 1994; Somnawan, 1997; Tiamdao, 1997; Tongtang, 1997; Vitaliano, Young, and Russo, 1991; Wanichanon, 1992). This is congruent with the study of Navarat (2002) which points out that stress of family caregivers of patients with cerebrovascular diseases is negatively related to health status of family caregivers ($r = -.658$, $p < .01$) and can predict health status by 50 %.

It can be seen that having to deal with emotional, mental, and behavioral problems of elderly patients with dementia can lead to family caregivers' stress and exhaustion, resulting in physical problems of family caregivers.

Rewards of Caregiving and Health Status of Family Caregivers of Elderly Patients with Dementia

Providing care to elderly patients with dementia does not bring about only negative experiences to family caregivers. It can also cause positive feelings called rewards of caregiving (Boonrayong, 2000; Gwi-Ryung Son, and Jaclene, 2003; Sasat, 1998). Family caregivers may experience good feelings as they see caregiving as a good opportunity to conduct a good deed, which may bring on good consequences in life in the future. At the same time, becoming a family caregiver is seen as being a role model to children or other family members (Suwanno, 2001). This can also be seen as a chance to show gratitude to the elderly family members, which can result in praise and admiration from others, making family caregivers feel that their life is more meaningful and they can take pride in their caregiving duties (Archbold, Stewart, Greenlick and Harvath, 1990; Kuaprom, 1999; Narayan, 2001; Sasat, 1998). Moreover, some family caregivers believe that they are happier as they have a better relationship with their elderly relatives (Hinrichsen et al., 1992; Narayan et al., 2001). Also, having to deal with a lot of problems in providing care of elderly patients with dementia can be seen as a valuable experience, making family caregivers better understand the process of the disease and aging.

In brief, good feelings caused by performing caregiving duties is like rewards of caregiving, making family caregivers happy, satisfied, and proud. Thus, these experiences can be motivation making family caregivers pay attention to their duties and reduce their stress, leading to more satisfaction in life and less depression and burdensome feelings (Pruchno, and Resh, 1989). Previous research has found that rewards of caregiving are associated with stress of family caregivers (Srithares, 2003). Therefore, it is possible that rewards of caregiving are positively associated with health status of family caregivers of elderly patients with dementia.

Communication Problems and Health Status of Family Caregivers of Elderly Patients with Dementia

Another cause of stress, which can affect family caregivers' health is difficulty in communicating with elderly patients with dementia. Communication problems require more patience and time of family caregivers.

Communication refers to an exchange of information between the speaker and the listener, involving listening to and understanding what is spoken, called receptive, and brainstorming ideas and using verbal expressions, called expressive (Hendryx-Betalov, 2000). Elderly patients with dementia have impaired communicative competence including impaired memory, abnormal thinking, abnormal use of language and conversation, and impaired understanding and communicating in the four skills of listening, speaking, reading, and writing. These cause problems in communication between family caregivers and elderly patients with dementia (Lee, 1991).

Moreover, when elderly patients with dementia have impaired memory and forgetfulness and are unable to carry on a conversation, they may ask the same questions repeatedly, which can cause irritability or boredom to family caregivers who have to answer the same questions or give the same explanations over and again. Pratt, et al. (1985) points out that caregivers perceive the patients' repeatedly asking the same questions as burdensome and causes stress. In addition, incoherent speech caused by communication impairment may result in misunderstanding, conflicts, or quarrels, hence further uneasiness of family caregivers (Boonrayong, 2000). Moreover, elderly patients with dementia may be unable to choose appropriate words to name things, stutter, use incoherent sentence structures, speak less, or stop speaking, and this may increase the problems of communication between the patients and family caregivers who need to use a lot of effort in trying to understand the message the patients want to convey. This, coupled with emotional changes of the patients, may further increase communication problems (Hendryx-Betalov, 2000; Sasat, 2000; Somnawan, 1997). The family caregivers may experience unhappiness, depression and stress (Almberg, Grafstrom, and Winblad, 1997; Williams, 1993). On top of this, deterioration in hearing may cause hearing impairment and lead to communication problems. All of this make caregiving duties even more difficult and troublesome (Boonrayong, 2000; Hendryx-Betalov, 2000). Similarly, Perkdetch (2002) found that communication problems with patients with cerebrovascular diseases are positively related to family caregivers' stress ($r = .310, p < .01$).

To sum up, taking care of elderly patients with dementia who have difficulty communicating can increase the difficulty in providing care and serving the patients' needs and this can become a major cause of stress of family caregivers.

Summary

Dementia is a chronic illness which is commonly found among elderly persons. It is one of the most important health problems, and it is caused by abnormality in the function of the neurological system. The affected elderly then suffer from impaired intellectuality, memory, language use, decision making, movement, as well as changes in emotional status, personality, and behavior. These abnormalities cause elderly persons to lose their ability to take care of themselves, and they have to depend on care given by others. Studies conducted with family caregivers of elderly patients with dementia have revealed that the amount of care caused by the dependence level of the elderly patients makes family caregivers deal with difficulties in providing physical, mental, emotional, and behavioral conditions. Besides, difficulty in communication with elderly patients with dementia is another factor that causes difficulties and stress to family caregivers. However, in providing care to the elderly patients with dementia, family caregivers may receive rewards of caregiving, or may experience fulfillment or satisfaction with their caregiving roles, which can reduce their burdensome feelings and stress, which in turn, helps maintain family caregivers' health status.

CHAPTER III

METHODOLOGY

This study was descriptive research which investigated the influences of amount of care, strain from direct care, rewards of caregiving, and communication problems on health status of family caregivers of elderly patients with dementia. This chapter describes the research methodology used in this study.

Population and Sampling

The population in this study was primary family caregivers who provided continuing care at home to elderly patients who were diagnosed with a form of dementia including Alzheimer's disease, vascular dementia, Parkinson's with dementia, and mixed dementia. They were family members or relatives of the patients, unpaid caregivers and they resided in the same house as the patients. They also took the patients to the elderly clinic, neurological clinic, psychiatric clinic, or dementia clinic at the Out-Patient Department of King Chulalongkorn Memorial Hospital, and the Prasat Neurology Institute.

The sample was selected based on the inclusion criteria as follows:

1. They were 18 years old or older
2. They provided care to the elderly patients with dementia regarding basic activities of daily living in at least three activities as well as provided care regarding instrumental activities of daily living in at least two activities
3. They had been providing care to elderly patients at home for at least three months to ensure that they had direct experience of caring for the patients in different situations.
4. In case the subjects were older than 60 years old, the cognitive assessment would be performed to assess whether their cognition and decision-making processes were normal or not, as they could affect the validity of the information given. They

had to have normal thinking process as assessed by orientation to date, time, month, and place.

The sample size was calculated based on the formula of Thorndike (1978 cited in Vorapongsathorn, 1989) as follows:

The sample size $\geq (10 \times n) + 50$ when n = number of independent variables

$\geq (10 \times 4) + 50$

≥ 90

Thus, in this study, the sample size was 90.

Settings

In this study, data were collected from the elderly clinic, neurological clinic, psychiatric clinic, or dementia clinic at the Out-Patient Department of King Chulalongkorn Memorial Hospital, and the Prasat Neurology Institute in regular working hours. These two institutes are considered tertiary hospitals located in Bangkok Metropolis, and they have clinics particularly for elderly patients and patients with dementia. The patients have to see the doctors as appointed for follow up and assessment of the patients' problems. There are no nurses or other staff who provide advice or consultation to family caregivers of elderly patients with dementia at home. In 2002, the numbers of dementia patients who sought treatment at the Out-Patient Departments of King Chulalongkorn Memorial Hospital, the Prasat Neurology Institute, were 744 and 4,442 respectively.

Research Instruments

The research instrument used in collecting data consisted of three parts as follows:

Part I: Instruments for screening subjects into inclusion criteria:

1. The Modified Barthal ADL Index (Mahoney and Barthel in1965) to serve as a measure for objective evaluation of activities of daily living consists of ten functional activities with cover eating, taking a shower, getting dressed, continence of bowels, controlling bladder, doing personal toilet, getting on and off toilet, walking on a level surface, propelling a wheelchair, ascending and descending stairs

2. The Instrumental Activities of Daily Living Scale (Lawton and Brody in 1969) consists of eight functional activities with cover taking the patients to the hospital for treatment, preparing food, doing household chores, doing launder, using telephone, taking medication, shopping and handling finances (Lueckenotte, 2000).

3. The Thai Mental Status Exam (Train The Brain Forum Thailand in 1993) to serve as a measure for objective evaluation of cognitive status with cover orientation, registration, attention, calculation, language, and recall. But in this study, only orientation was used by assess perception to date, time, and place (Siriraj Hospital. Gazette, 1993).

Part II: Demographic characteristics questionnaires including:

1. The questionnaire eliciting information regarding demographic characteristics of the family caregivers of elderly patients with dementia including gender, age, profession, educational background, marital status, length of time providing care to the patients, monthly family income, health problems before and during caregiving, experience in caregiving, helper, relationship with the patients, reasons for caregiving, and knowledge about caregiving of dementia patients.

2. The questionnaire eliciting information regarding demographic characteristics of dementia patients including gender, age, diagnosis, level of dependency, duration of illness, ability to speak; memorize; think and make decisions, comorbidity diseases, and right to reimburse treatment fee. (see Appendix A)

Part II: This part consisted of four questionnaires—strain from direct care questionnaire (including the questionnaire assessing amount of care), communication problems questionnaire, rewards of caregiving questionnaire, and short form-36 health survey questionnaire of family caregivers. The first three questionnaires were designed by Stewart and Archbold (1994) based on qualitative research on caregivers of patients with a chronic illness. They had been continuously developed until becoming standard instruments. The questionnaires of Stewart and Archbold (1996) were used with caregivers of elderly patients who were stricken with different chronic illnesses and the Cronbach's Alpha Coefficient confirmed the reliability of each questionnaire as follows:

Strain from direct care questionnaire	.86 - .91
Communication problems questionnaire	.77
Rewards of caregiving questionnaire	.67 - .94
Short form-36 Health survey questionnaire	.77 - .90

In Thailand, these instruments were used with different groups of caregivers of patients with cerebrovascular disease. The reliability of each questionnaire was shown as table 1.

Table 1 Reliability of the Instruments

Researcher	Instrument	Reliability
Boonyarat Perkdetch (2002) Kewalin Saengboon (2002)	Strain from Direct Care Questionnaire	.90 - .95
Boonyarat Perkdetch (2002)	Communication Problems Questionnaire	.81
Kaewalin Sangboon (2002) Saowaluck Natechang (2002) Wilaiporn Srithares (2003)	Rewards of Caregiving Questionnaire	.87 - .92
Saowaluck Natechang (2002) Wiparat Navarat (2002)	Short Form 36- Health Survey	.93 - .94

The Communication Problems Questionnaire, Rewards of Caregiving Questionnaire and Short Form-36 Health Survey Questionnaire were translated from English to Thai by Wirojratana et al. (2002) and were then backtranslated to English by a bilingual linguist. The Strain from Direct Care Questionnaire was translated from English to Thai by Kasemkitwattana and was backtranslated to English by Wasanasomsithi .These four questionnaires were examined to ensure that the items were appropriate for use in the Thai context by Wirojratana et al. (2002). The details of the four questionnaires were as follows:

1. The Strain from Direct Care Questionnaire (see Appendix A) was divided into two parts:

Part I assessed the amount of care. It examined the caregiving activities performed by family caregivers of elderly patients with dementia asking them to indicate whether they had ever given care to the elderly patients in any of the 77 activities included: 25 items related to personal care, 10 items related to mobility and protection, 8 items related to illness, 5 items related to transportation, banking, and housekeeping, 11 items related to emotional support and little extra tasks, and 18 items related to problems caused by dementia and behavioral changes. The responses to each item were marked as 0 (caregivers never provided help or care in that activity) and 1 (caregivers provided help or care in that activity). The total scores ranged from 0 to 77, with higher scores indicating family caregivers had many caregiving activities and lower scores suggesting that family caregivers did not have many caregivign activities.

Part II elicited difficulty in providing care to elderly patients with dementia in doing different activities—whether the difficulty existed and to what extent. This part consisted of 77 items arranged in a 5-point rating scale ranging from 1 (not difficult at all) to 5 (extremely difficult). In case the family caregivers did not provide care to the patients in any respect, the score would be 0. The total scores ranged from 0 to 385, with higher scores reflecting a high level of strain from direct care and vise versa.

2. Communication Problems Questionnaire (Appendix A) was used to assess communication problems between family caregivers and elderly patients with dementia. It was composed of six items which asked whether the elderly patients had caused communication difficulty and how much trouble this had caused family caregivers. The responses were rated in a 5-point rating scale from 0 (not at all) to 4 (most). The total scores ranged from 0 to 24 points and the higher the scores, the more the communication problems between family caregivers and elderly patients with dementia.

3. Rewards of Caregiving Questionnaire (Appendix A) was a tool used to evaluate how much good feeling family caregivers had from providing care to elderly patients with dementia. It consisted of 28 items divided into five aspects—rewards of meaning (12 items), rewards of learning (4 items), financial rewards (2 items), spiritual rewards (7 items), and rewards of being there (3 items). The subjects chose one of the responses arranged in a 5-point rating scale from 0 (not at all) to 4 (most). The total scores of the questionnaire were 0 to 112. Higher scores meant caregiving was more rewarding, and vice versa.

4. The Short Form 36-Health Survey (SF-36) (Appendix A) was an instrument used to determine whether family caregivers of elderly patients with dementia had any physical and mental problems caused by their caregiving duties and how much. It was developed by Ware and Sherborne (1986, 1992). It consisted of 36 items eliciting information regarding the two dimensions of health status—physical and mental dimensions. The items were arranged in a Likert scale. One item was a report on the overall heath status in the past, and it was not calculated for scores. As for the other 35 items, one item concerned the comparison of the health status during the past three months and the health status at present, which was rated in a 5-point rating scale of 0 (much worse than three months ago) to 25 (worse than three months ago) to 50 (same as three months ago) to 75 (better than three months ago) to100 (much better than three months ago). Ten items elicited information about limitations in doing activities and daily living activities in a 3-point rating scale of 0 (a lot of limitations) to 50 (some limitations) to 100 (no limitations at all). As for the other 24 items, there were six items with positive meaning rated in a 5-point scale of "not at all" (0 point), "once in a while" (25 points), "sometimes" (50 points), "most of the time" (75 points), and "all the time" (100 points). The other 18 items were negative items with reverse scoring.

The total scores ranged from 0 to 3500, with low scores suggesting bad overall health status and high scores indicating good overall health status.

Reliability

As for the reliability of the instruments, the four questionnaires were tried out with 20 family caregivers of elderly patients with dementia who shared similar characteristics with the subjects of the main study. KR-21 and Cronbach's Alpha Coefficient was then calculated with the following results in Table 2.

Table 2 The Reliability of the Research Instruments in this Study

Instrument	Cronbach's Alpha Coefficient (n = 20)	Cronbach' s Alpha Coefficient (n = 90)
Amount of Care Questionnaire	.74 (KR-21)	.87 (KR-21)
Strain from Direct Care Questionnaire	.85	.93
Communication Problems Questionnaire	.67	.73
Rewards of Caregiving Questionnaire	.76	.94
Short Form -36 Health Survey	.78	.93

Protection of Human Rights

The researchers were aware of the research ethics and understood that the data collected must be used with care not to affect the givers of the information. Therefore, before data collection was proceeded, the researcher explained the objectives of the research, utilization of data, and expected outcomes and benefits. The subjects had the right to agree to participate or refuse to participate in the study. They could also withdraw from the study at anytime if they wished, and their decision would not affect the care the patients would receive in any way. In addition to this, the data collected from them would be kept strictly confidential, and they would be reported only as group data with no way to identify the subjects. The researcher also provided the subjects with opportunity to ask questions to clarify their doubts. After that, they were asked to sign an informed consent form before data collection began.

In case, the sampling group expresses dissatisfaction, sadness or frustration from the questionnaires whether in any part of the research process, the researcher planned to handle those probable problems as follows:

1. Stop the interview and data collection immediately
2. Explain to the subjects that they can withdraw from the study anytime without any effect to their patients' ongoing treatment
3. Let the subjects express their feeling or frustration to the researcher

4. Coordinate with the treating team for proper assistance
5. Contact a supervisor, head nurse and Ethical Committee of Research in Human Beings within 24 hours
6. Let the subjects in contact with the researcher 24 hours a day

Data Collection

The researcher collected data by herself. The data collection procedure began when the researcher proposed the research topic to the Ethical Committee of the research sites. After approval was granted, a letter from the School of Graduate Studies, Mahidol University, was sent to the directors of the two hospitals introducing the researcher and asking for permission to conduct data collection. After permission was given, the head of the out-patient departments at the two hospitals were contacted. The researcher introduced herself, explained the objectives of the study and the data collection procedure to the head of the out-patient departments, and asked for cooperation in data collection which proceeded as follows:

King Chulalongkorn Memorial Hospital: Tuesdays, 8:00 a.m. – 3:00 p.m. and Thursdays, 8:00 a.m. – 11:00 a.m.

Prasat Neurology Institute: Mondays, Wednesdays, and Fridays, 8:00 a.m. – 12:00 a.m.

The researcher surveyed the registration name list of the patients 60 years of age and older who were diagnosed with dementia before approaching the patients and their family caregivers while they were waiting to see the doctors. The researcher established rapport and asked the family caregivers questions. If they met the inclusion criteria, the researcher explained the objectives of the study and informed them of human rights protection. If the family caregivers agreed to participate in the study, they were then asked to sign the informed consent form (Appendix B). In the event that family caregivers refused to sign the informed consent form, but agreed to complete the questionnaires and returned them to the researcher, it would be assumed that doing so indicated their consent. The subjects were also told that if their turn to see the doctors came while they were filling out the questionnaires, the nurses responsible for the examination rooms would contact them so that they would not have to be worried about missing their turn.

As for data collection, if the subjects were able to fill out the questionnaires by themselves, the research would let them do so. The researcher would explain how to complete each of the questionnaires until understanding was achieved. After that, the researcher would wait nearby when the subjects were responding to the questionnaires so that the subjects' questions or doubts would be immediately answered or clarified. However, if the subjects were illiterate, they would be interviewed by the researcher based on the questionnaires—demographic characteristics of the subjects themselves, demographic characteristics of the patients, rewards of caregiving, communication problems, strain from direct care, and short form-36 health survey of family caregivers, respectively. This took approximately 45 to 50 minutes. If there were other relatives accompanying the patients and family caregivers to the hospital, the researcher would ask them to look after the patients while the family caregivers were completing the questionnaires. However, if there were nobody else, the researcher would ask the family caregiver to respond to the questionnaires with the patients nearby so that they could take time off and provide care to the patients if necessary. Moreover, if the subjects were not ready to give information at that time, an appointment would be made for the next time they brought the patients to the hospitals for a follow-up or the researcher would go to the family caregivers' houses, as the family caregivers considered. The researcher would ask for their contact information to make an appointment prior to visiting them at home. In cases the primary family caregivers did not accompany the patients to the hospital; the researcher would ask for their telephone number from the relatives accompanying the patients and call them at a later occasion for data collection. The researcher limited the number of family caregivers to be interviewed to four caregivers per day. After data were collected from 90 family caregivers, data analysis began.

Data Analysis

The computer program SPSS was used in the data analysis as follows:

1. Data regarding demographic characteristics of family caregivers and elderly patients were analyzed in terms of frequency distribution and percentage.

2. Range, mean, and standard deviation were calculated for each aspect and overall amount of care, strain from direct care, rewards of caregiving, communication problems, and health status of family caregivers.
3. Pearson's product moment correlation coefficient was used to analyze all the variables in the study— amount of care, strain from direct care, rewards of caregiving, communication problems, and health status of family caregivers.
4. All the predictive factors— amount of care, strain from direct care, rewards of caregiving, communication problems, and health status of family caregivers were calculated for multiple regression coefficients using the stepwise multiple regression analysis with the significance level set at 0.05.

Before data analysis began, the researcher examined the initial agreement of the multiple regression coefficient analysis as follows:

1. Analysis residual
    1.1 The data were distributed with a normal distribution based on the analysis of the frequency of the information and a plot histogram.
    1.2 The variances are rather similar or equal to 0 (Homoscedasticity), and the distribution of the data was examined by using the scattergram from the bottom left corner to the top right corner.
2. The multicollinearity test was conducted using Pearson's product moment correlation coefficient to evaluate the relationships among all the independent variables.

CHAPTER IV

RESULTS

This study aimed at investigating factors influencing health status of family caregivers of elderly patients with dementia based on the conceptual framework of Folkman and Lazarus (1984). The subjects were 90 primary caregivers who continuously provided care to elderly patients with dementia at home for at least three months and took the elderly patients with dementia to receive treatments at the out-patient department of King Chulalongkorn Memorial Hospital and the Prasat Neurology Institute from January to June 2004. Actually, there were 99 family caregivers; but 3 subjects refused to participate in the study and 6 subjects had impaired cognition. During data collection, 68 subjects were interviewed by the researcher, while 22 of them completed the questionnaires by themselves. As for data analysis, descriptive statistics, Pearson's product moment correlation, and multiple regression analysis were employed. This chapter presents the findings of the study.

Demographic Characteristics of Family Caregivers

The findings revealed that more than three-quarters (78.9%) of the family caregivers were female. The age ranged from 24 to 78 years old, with the average age of 51.82 years. More than half (54.5%) were married, while 42.2% were single. Almost all of the subjects (94.5%)were Buddhists. As regards the relationship with the elderly patients with dementia, the largest groups (47.8%) were daughters, followed by those who were spouses, sons, relatives, and nieces/nephews or grandchildren, respectively. Moreover, most subjects (41.1%) graduated in Bachelor or Master Degree from a university, and more than half (53.3%) worked to earn their livings. However, 37.7% did not have to work everyday. Finally, in terms of income, one-fourth (25.6%) had a monthly family income between 15,001 and 30,000 baht. Most of them had sufficient income (81.2%), but about half of them did not have savings. (Table 3)

Table 3 Demographic Characteristics of Family Caregivers of Elderly Patients with Dementia (N = 90)

Characteristics	Number (n = 90)	Percent	Characteristics	Number (n = 90)	Percent
Gender			**Educational level**		
Female	71	78.9	No formal education	3	3.3
Male	19	21.1	Elementary level	24	26.7
			High school level	16	17.8
			Diploma	10	11.1
			Bachelor degree	29	32.3
			Master degree	8	8.8
Age (years)			**Occupation status**		
≤ 30	5	5.6	**Working**	48	53.3
< 30-45	22	24.4	Some day	34	37.7
< 45-60	44	48.9	Every day	14	15.6
< 60-75	15	16.7	**Not working**	42	46.7
≥ 75	4	4.4	Resign for caring	15	16.7
Range 24-78; Mean 51.82; SD. 12.997			Housewife	14	15.6
			Retired	12	13.3
			Unemployed	1	1.1
Marital status			**Average family income (baht/month)**		
Married	49	54.5	< 5,000	4	4.4
Single	38	42.2	5,001-10,000	15	16.7
Divorced / Separated / Widowed	3	3.3	10,001-15,000	22	24.4
			15,001-30,000	23	25.6
			30,001-45,000	13	14.4
			45,001-60,000	8	8.9
			> 60,001	5	5.6
			Range 2,500-200,000; Mean 27,677.78; SD. 28,051.75		

Table 3 Demographic Characteristics of Family Caregivers of Elderly Patients with Dementia (N = 90) (cont.)

Characteristics	Number (n = 90)	Percent	Characteristics	Number (n = 90)	Percent
Religion			**Sufficiency of income**		
Buddhist	85	94.5	No enough money and loan needed	10	11.1
Christian	4	4.4			
Muslim	1	1.1	No enough money but no loan needed	7	7.7
Relation with patient					
Daughter	43	47.8	Enough money with no saving	37	41.1
Spouse	23	25.6			
Son	14	15.6	Enough money with savings	36	40.1
Other relatives (niece/ nephew/ sister)	10	11.0			

In terms of duration of caregiving, the subjects had been providing care to the elderly patients with dementia for three months to 11 years, with the average of 3.86 years. Most of them (84.4 %) had provided care to the patients for less than six years, lasting from two to 24 hours a day, with the average of 12.78 hours per day. Close to three-quarters (74.4%) never had previous experience caring for patients, and 71.1%, had a helper at home.

In addition, 74.5% of the subjects did not have to provide care to other persons except elderly patients with dementia, 73.3% of the subjects had never been taught or trained on how to provide care to the patients. As for assessment of stress levels during caregiving, it was discovered that the stress levels of the subjects ranged from 3 to 8, with 64.5% of them having a mild level of stress (levels 3-4). With regard to the reasons why the subjects took the responsibility of caregiving, it was found that 47.7% felt that it was their duty and responsibility, whereas 28.8% felt that they were suitable as they did not work and had time to provide care. As regards the caregivers' health status, 60% did not have any previous health problems. One interesting finding was that the increase number of health problems from 40% to 73.3% regardless of their health status before performing caregiving. They experienced some form of illness during caregiving duties including stress, anxiety, aching, moody, headache or dizziness, sleeplessness, and exhaustion. See Table 4.

Table 4 Information Related to the Caregiving Situations (N=90)

Information	**Number (n = 90)**	**Percent**	**Information**	**Number (n = 90)**	**Percent**
Duration of caregiver (years)			**Other person caring responsibility**		
≤ 2 year	38	42.2	No	67	74.5
> 2-6 years	38	42.2	Yes	23	25.5
> 6-10 years	11	12.3	Child	13	
≥ 10 years	3	3.3	Parent	10	
Range 3 mo.-11years; Mean 3.86; SD. 2.67					
Time spent with patient (hour/day)			**Knowledge about caregiving**		
≤ 6	26	28.9	No	66	73.3
> 6–12	27	30.0	Yes*	24	26.7
>12–18	13	14.5	Memory retaining	22	
≥18	24	26.6	Personal hygiene	12	
Range 2-24; Mean 12.78; SD. 7.605			Feeding	5	
Experience of caregiving			**Level of stress**		
No	67	74.4	Fairy low (3-4)	58	64.5
Yes	23	25.6	Moderate (5-6)	24	26.6
Stroke	7		Fairy high (7-8)	8	8.9
Aging	5		Range 3-8; Mean 4.82; SD. 1.406		
Heart	3				
Dementia	2				
Hypertension	2				
Diabetes mellitus	2				
Malignancy	2				

Table 4 Information Related to the Caregiving Situations (N=90) (cont.)

Information	Number (n = 90)	Percent	Information	Number (n = 90)	Percent
Helper			**The reason of becoming caregiver***		
No	26	28.9	Duty / responsibility	43	47.7
Yes*	64	71.1	Unemployed	26	28.8
Brother /Sister	26		No one else was available to assume the caregiving role	22	24.4
Son / Daughter	18				
Relatives	16		Love / attachment	12	13.3
Employee	10		Live in same house	12	13.3
Spouse	3		Reciprocity	5	5.5
Health problem before caring			**Health problem during caring**		
No	54	60.0	No	24	26.7
			Yes***	30	33.3
Yes**	36	40.0	No	0	0
Allergy	7		Yes***	36	40.0
Gastritis	4		Stress/ Anxiety	31	
Hyperlipidemia	4		Back pain	10	
Diabetes Mellitus	3		Shoulder pain	8	
Hypertension	3		Headache/ Dizziness	8	
Heartdisease	3				
Thyroid	3		Sleeplessness	8	
Asthma/ COPD	3		Exhaust	8	
Arthitis of knee	3		Moody	7	
Back pain	2		Gastritis/ Duodenum ulcer	4	
Others	2				
			Diabetes Mellitus	2	
			Hypertension	2	
			Dyspnea	2	
			Allergy	2	

*** Each caregiver had more than one answer concerning reason**

**** Each caregiver had more than one health problem before caregiving**

***** Each caregiver had more than one health problem during caregiving**

Demographic Characteristics of Elderly Patients with Dementia

The findings indicated that more than half of the subjects (58.9%) were female. The subjects ranged in age from 60 to 90 years old, with the mean age of 77.72 years. Almost all (93.3%) were Buddhists. In terms of marital status, 47.8% and 46.7% were widowed and married, respectively. Regarding their diagnosis, 45.6% suffered from Alzheimer's disease, whereas 44.4% had vascular disease. Of the total number of patients, three-quarters (75.6%) also suffered from co-morbidity including hypertension, diabetes mellitus, cerebrovascular disease, heart disease, and hyperlipidemia.

When considering the duration of dementia, the subjects had been suffering from dementia from three months to 11 years, with the mean of 4.09 years (SD = 2.186). As for impairment, 87.8% had impaired memory, 45.6% had impaired speech and 91.1% had impaired thought and decision making. Moreover, 43.3% and 42.2% had dependence levels at high and moderate levels, respectively. Finally, about 70% of the subjects could reimburse the payment for their treatment. See Table 5.

Table 5 Demographic Characteristics of Elderly Patients with dementia (N = 90)

Characteristics	Number	Percent	Characteristics	Number	Percent
Gender			**Memory (by caregivers' perception)**		
Female	53	58.9	Normal	11	12.2
Male	37	41.1	Deficit	69	76.7
			Complete Loss	10	11.1
Age (years)			**Speech (by caregivers' perception)**		
60-70	12	13.3	Normal	49	54.4
70-80	42	46.7	Dysphasia	34	37.8
80-90	36	40.0	Aphasia	7	7.8
Range 60-90; Mean 77.72; SD. 7.096					
Religion			**Thought and decision (by caregivers' perception)**		
Buddhist	84	93.3	Normal	8	8.9
Christian	5	5.6	Slow	61	67.8
Muslim	1	1.1	Complete loss	21	23.3
Marital status			**Level of dependence**		
Widowed	43	47.8	Low	13	14.5
Married	42	46.7	Average	38	42.2
Divorced/Separate	5	5.5	High	39	43.3
Diagnosis			**Source of payment**		
Alzheimer's	41	45.6	Government reimbursement	63	70.0
Vascular dementia	40	44.4			
Parkinson's with dementia	8	8.9	Self paid	26	28.9
			Universal coverage	1	1.1
Mixed dementia	1	1.1			

Table 5 Demographic Characteristics of Elderly Patients with dementia (N = 90) (cont.)

Characteristics	Number	Percent	Characteristics	Number	Percent
Comorbidity					
No	22	24.4			
Yes*	68	75.6			
Hypertension	22		Arthitis	8	
Diabetes mellitus	18		Gout	4	
Heart disease	15		Asthma	2	
Hyperlipidemia	15		Thyroid	1	
Cerebrovascular disease	15				
Duration of dementia					
≤ 2 year	33	35.6			
> 2-4 years	23	25.6			
> 4-6 years	14	15.6			
> 6-8 years	8	8.8			
> 8-10 years	9	10.0			
≥10 years	3	4.4			
Range 3 mo.-11 years; Mean 4.09 years; S.D. 2.186					

*** Each patient could have more than one comorbidity.**

Findings Regarding Amount of Care, Strain from Direct Care, Rewards of Caregiving, Communication Problems, and Health Status of Family Caregivers of Elderly Patients with Dementia

When analyzing the means and standard deviations of the study variables, it was found that the subjects had a rather high amount of care (mean = 46.46; SD = 10.36; Skewness = -0.012). When adjusting the base number of items in each aspect, it was found that the subjects had a rather similar amount of care, except emotional support and littlle extra tasks received the lowest amount of care, as shown in Table 6.

Table 6 Mean Scores, Standard Deviation, and Ranges of Amount of Care (N = 90)

Amount of care	Possible Range	Actual Range	M	SD.	Skewness	M adj.*
Overall amount of care	0-77	21-71	46.16	10.36	-0.012	
Personal care	0-25	3-25	17.21	5.38	-0.652	0.68
Illness related care	0-8	2-8	5.38	1.69	-0.360	0.67
Mobility and protection	0-10	2-10	6.51	1.79	-0.531	0.65
Transportation/banking/ housekeeping	0-5	0-5	2.57	1.12	0.147	0.51
Dealing with dementia	0-18	1-17	9.17	3.75	-0.148	0.51
Emotional support and little extra tasks	0-11	1-10	5.32	2.26	0.139	0.48

*** M adj. is a mean obtained after adjusting the base number of items.**

As regards the strain from direct care, the findings suggested that most of the subjects had a rather low level of strain from direct care (mean = 89.38; SD = 36.251; Skewness = 1.029). When dividing with the number of items, it was discovered that the subjects had rather similar mean scores of strain from direct care, except for the mean score of strain from direct care in terms of emotional support and littlle extra tasks which was the lowest, as illustrated in Table 7.

Table 7 Mean Scores, Standard Deviation, and Ranges of Strain from Direct Care (N = 90)

Strain	Possible Range	Actual Range	M	SD.	Skewness	* M adj.
Overall strain from direct care	1-385	24-211	89.38	36.25	1.029	
Dealing with dementia	1-90	1-55	23.22	12.42	0.805	1.29
Mobility and protection	1-50	2-32	12.84	6.43	0.793	1.28
Personal care	1-125	3-82	30.64	15.05	0.967	1.23
Illness related care	1-40	2-30	9.47	5.52	1.040	1.18
Transportation/ banking/ Housekeeping	1-25	1-16	4.77	3.14	1.084	0.95
Emotional support and littlle extra tasks	1-55	2-22	8.44	4.89	1.043	0.77

*** M adj. is a mean obtained after divided by the number of items in each aspect.**

As for rewards of caregiving, most of the subjects had a rather high level of perceived rewards of caregiving (mean = 64.23; SD = 22.28; Skewness = -0.487). When calculating for the mean by dividing with the number of items, it was discovered that the rewards of caregiving in all aspects were rather similar, except for financial rewards which was lowest, as shown in Table 8.

Table 8 Mean Scores, Standard Deviation, and Ranges of Rewards of Caregiving

Rewards	**Possible Range**	**Actual Range**	**M**	**SD.**	**Skewness**	***M adj.**
Overall rewards of caregiving	0-112	14-108	64.23	22.28	-.487	
Rewards of being there	0-12	0-12	7.78	2.89	-.653	2.59
Spiritual rewards	0-28	2-28	17.94	6.99	-.480	2.56
Rewards of meaning	0-48	2-48	27.16	10.41	-.464	2.26
Rewards of learning	0-16	1-16	8.86	3.61	-.134	2.22
Financial rewards	0-8	0-6	2.50	1.67	-.096	1.25

*** M adj. is a mean obtained after divided by the number of items in each aspect.**

When considering communication with the elderly patients with dementia, it was found that most of the subjects had a low level of communication problems (mean = 7.52; SD = 4.23; Skewness = 0.845). The most commonly found communication problems were those related to memory and understanding which had the highest mean score (mean = 3.27; SD = 1.95), followed by speech problems (mean = 2.83; SD = 2.11), while the least commonly found problems were those related to hearing problems (mean = 1.42; SD = 1.76). On the other hand, the mean score of the subjects' health status was rather high (mean = 2467.89; SD = 506.398), as depicted in Table 9.

Table 9 Mean Scores, Standard Deviation, and Ranges of Communication Problems and Health Status

Variables	Possible Range	Actual Range	M	SD.	Skewness
Overall communication problems	0-24	0-24	7.52	4.23	.845
Speech problem	0-8	0-8	2.83	2.11	.240
Memory/ Understanding	0-8	0-8	3.27	1.95	.504
Hearing problem	0-8	0-8	1.42	1.76	1.174
Overall health status	0-3500	1125-3400	2467.89	506.398	-.374

Relationship between Amount of Care, Strain from Direct Care, Rewards of Caregiving, Communication Problems, and Health Status of Family Caregivers of Elderly Patients with Dementia

Pearson's Product Moment Correlation Coefficient was calculated to examine the relationship among all the study variables. It was found that only strain from direct care and communication problems were negatively related to caregivers' health status at a moderate level ($r = -.471$, $p < .01$ and $r = -.417$, $p < .01$, respectively). When considering the relationships among predictor variables, it was discovered that amount of care and communication problems were positively related to strain from direct care ($r = .629$, $p < .01$ and $r = .454$, $p < .01$, respectively), while amount of care was positively related to rewards from care ($r = .307$, $p < .01$), as shown in Table 10.

Table 10 Pearson's Product Moment Correlation between Variables

Variables	**1**	**2**	**3**	**4**	**5**
1. Amount of care	1.00				
2. Rewards of caregiving	.307**	1.00			
3. Strain from direct care	.629**	.020	1.00		
4. Communication problems	.168	-.038	.454**	1.00	
5. Health status	-.144	.099	-.471**	-.417**	1.00

** p < .01

Prediction of Health Status of Family Caregivers of Elderly Patients with Dementia

After the assumptions of Multiple Regression Analysis were tested included linearity, normality, homoscedasticity, and multicollinearity. Stepwise Multiple Regression Analysis was conducted to examine the predictive power of the study variables. The first variable chosen to enter the equation was strain from direct care, which could predict caregivers' health status by 22% ($F_{(1, 88)} = 25.134$, $p < .01$). The second variable to enter the equation was communication problems, which could predict caregivers' health status by another 5% ($F_{(1, 87)} = 6.230$, $p < .01$). Thus, strain from direct care and communication problems could co-predict health status of family caregivers by 27.4% ($F_{(2, 87)} = 16.429$, $p < .01$), as illustrated in Table 11.

Table 11 Prediction of Health Status among Family Caregivers of Elderly Patients with Dementia

Predictor	**R**	**R^2**	**R^2 change**	**F change**	**b**	**Beta**	**t**	**P-value**
Strain from Direct care	.471	.222	.222	25.134	-4.962	-.355	-3.466	.001
Communication Problems	.524	.274	.052	16.429	-30.628	-.256	-2.496	.010

CHAPTER V
DISCUSSION

The present descriptive study aimed to investigate the health status of family caregivers of elderly patients with dementia based on the conceptual framework of Lazarus and Folkman (1984). In this study, caregiving situation is considered different from amount of care. Family caregivers may assess their stress as caused by difficulty in caregiving and communication problems with the patients, and they may assess the caregiving situation as positive based on the rewards of caregiving they received. These all have an effect on family caregivers' adaptation; that is, their health status. In the present study, the research hypothesis stating that amount of care, strain from direct care, communication problems with the elderly patients with dementia, and rewards of caregiving could co-predict the health status of caregivers was tested. The discussions of the research findings are presented in this chapter.

Demographic Characteristics of Family Caregivers of Elderly Patients with Dementia

Most of the subjects in this study were female, with the mean age of 51.8 years. About half were daughters of the patients. These findings were similar to those of the studies conducted by Boonrayong (2000), Gwi-Ryung Son (2003), Rakhanam (2000), Sasat (2000) and Tangchoorat (2000). One plausible explanation is that in the Thai society, children, especially female, are taught to show gratitude to their parents and ancestors. Also, females are expected to take charge of household chores and to take care of family members who are sick (Tangchoorat, 2000). In this study, more than half of the elderly patients with dementia (53.3%) were widowed or divorced / separated, so when they were sick, their daughters needed to care for them. This can be seen from the responses of 47.7% of the family caregiver subjects who stated that they felt that it was their duty and responsibility to perform the caregiving role (see

Table 4). Support can be found in the studies of Sangboon (2002), Sasat (2000), Songwattanayuth (2002) and Srithares (2003).

The findings revealed that the subjects spent the average of 12.78 hours per day taking care of the patients, which was rather similar to the findings of Tangchoorat (2000). In addition, it was found that 64.5% of the subjects had a low level of stress. This was different from the findings of Tiamdao (1997) who found that family caregivers of patients with dementia had moderate to high levels of stress. This may be because in Tiamdao’s study, the subjects selected had already suffered from at least a moderate level of stress, while the subjects chosen in this study had only a low level of stress to begin with.

As for personal assistance or helpers, close to three-quarters of the subjects (73%) had someone who helped them with caregiving duty, namely children, siblings, or spouses (Table4). This finding was congruent with the findings of Boonrayong (2000), Rakhanam (2000), Sangboon (2002), Sasat (2000) and Srithares (2003) which reflected that family members are an important resource in caregiving.

Moreover, 40% of the subjects had co-morbidity including hypertension, diabetes mellitus, heart disease, and hyperlipidemia (Table 4). Again, the findings are rather similar to those of previous studies (Natechang, 2002). One interesting finding is that 73.3% of the subjects experienced sicknesses after providing care to the patients such as stress, anxiety, aching, moody, headache or dizziness, sleeplessness, and exhaustion (see Table 4). Once again, this was in agreement with the findings of previous studies (Boonrayong, 2000; Rakhanam, 2000; Sasat, 2000; Tangchoorat, 2000) indicating that caregiving responsibility affects the subjects’ physical and mental well-being.

Demographic Characteristics of Elderly Patients with Dementia

The patient subjects in this study ranged in age from 60 to 90 years, with the mean age of 77.72 years. More than half (58.9%) were female. These findings agreed with those of the studies conducted by Boonrayong (2000), Clark (2003), Gwi-Ryung Son, and Jaclene (2003), Rakhanam (2000) and Wicheantong (2000). In general, dementia is commonly found when individuals are getting older. That is, those aged between 70 and 79 years had 1.40 times higher risk of dementia than those aged between 60 and 69 years. The risk increases to 2.5 times in those who are 80 years old and older. This is because of the deterioration of the brain cells. Also, dementia is more commonly found in females than in males (Tabmanee, 1998), with the risk 1.70 times higher in females (Sowanna, 1995). One explanation is that the average age of females is higher than that of males, and there are more female populations (Tabmanee, 1998). This, coupled with the decrease in female hormones in the elderly people, results in the prevalence of dementia in female population (Senanarong et al., 2004).

Furthermore, the largest group of subjects (45.6%) had Alzheimer's disease. This supports the finding of Senanarong et al. (2004). This is because neurodegenerative disorders result in specific pathology, namely, the accumulation of amyloid plaque and neurofibrillary tangle, which is more prevalently found in the neocortex and the hippocampus of the brain (Panthumjinda, 2000; Thanyakijpaisal, 2000). Such condition can occur together with the decrease in size of the brain, which is commonly found in the fronto-parietal and the temporal lobes, leading to the destruction or the loss of neurological cells. At the same time, the secretion of neurological transmission substances such as choline acetyltransferase is reduced (Panthumjinda, 2000; The Neurological Surgery Society of Thailand, 2004). These conditions affect the functions of the brain, especially those related to memory and learning. Thus, 91.1% of the subjects in the present study had impaired thought and decision making processes, while 87.8% had impaired memory and 45.6% had impaired speech (see Table 5). This may be because 61.2% of the subjects had been suffering from dementia for the first four years, which means they had only a mild or moderate level of serverity (Thanyakijpaisal, 2001). This may have caused abnormality in concentration or intention, forgetfulness, and loss of memory than speech production. The subjects may speak more slowly, and they may not be able to pronounce some word clearly.

In addition, about 44.4% of the subjects had vascular dementia caused by the abnormality of the blood circulation, making the blood circulated in the brain insufficient for the brain. The outcome is ischemic, which is normally found whether the patients have multi-infarct dementia caused by narrowed or blocked vasculars running from the Atheroselerosis. Brodaty, and Green (2000) and Senanarong et al. (2004) had a similar findings. Besides, dementia can bring about co-morbidity (Hutchinson, and Wilson, 1996; Dawes, 1996 cited in Leuckenott, 2001). For example, the high blood sugar level in diabetic patients will destroy the vessel basement membrane, leading to atherosclerosis that causes blocked or narrowed blood vessels. Also, high blood pressure can destroy the endothelial tissue of the blood vessel, thus stimulating artheroma which also causes narrowed and blocked blood vessels (Emerson, 2002), while stroke brings about multi-infarction of the brain. Finally, heart diseases which are caused by abnormal heartbeat and leakage in heart valves can cause emboli which can block the blood vessels in the brain (Smith et al., 2001), resulting in cerebral infarction. In this study, the top five co-morbidity suffered by three-quarters (75.6%) of the subjects included hypertension, diabetes mellitus, stroke, heart disease, and hyperlipidemia (see Table 5).

Amount of Care

In this study, it was found that most of the subjects assessed the amount of care at a rather high level (mean = 46.16; SD = 10.36; Skewness = -0.012) (see Table 6). This means that the subjects did not provide a considerable amount of care to the patients even though 85.5% of the patients had either a moderate or a high level of dependence (see Table 6). These findings were similar to those of Kuaprom (1999). This may be because 73% of the subjects had other family members who helped them with their caregiving duty. For instance, some subjects stated that there had someone who took turn providing care to the subjects during holidays, or family members divided caring responsibilities which could reduce the amount of care performed by primary family caregivers. It was found that on average the subjects performed 46.16 caring activities out of 77 activities (SD = 10.36).

When considering each aspect of caregiving, it was found that the subjects provided personal care which was related to the patients' illness, mobility, and protection of harm at a rather similar level (see Table 6). These findings were congruent with those of Kuaprom (1999), Perkdeth (2002) and Sangboon (2002). This is because 75.6% of the subjects had co-morbidity including diabetes mellitus, hypertension, and heart disease which required them to have certain self-care practice or take medications constantly. Thus, the care given by the subjects included making sure that the patients received appropriate water and food intake (93.3%), supervising proper medication intake and injection (91.1%), preparing food (90.0%), reporting changes to physicians or nurses (92.2%), and providing information regarding the patients' condition to other family members (87.8%). In addition, some had to help patient buying things or running errands on behalf of the patients (91.1%), while at the same time protecting the patients from harms and ensuring their safety (88%) such as preventing them from falling down (90%). Some subjects felt that they did not want to leave the patients alone; as a result, almost all of them (97.8%) spent most of their time with the patients (see the Appendix D), as reflected in the subjects' responses that they spent 12.78 hours per day provoding care of the patients on average (see Table 4).

On the other hand, the subjects provided the least amount of care regarding emotional support and little extra tasks (see Table 6) including running errands related to law or legal actions (16.7%), writing (17.8%), reading to the patients (25.6%), repairing household equipment (28.9%), and performing religious activities (35.6%). This may be because the subjects had other persons who helped them with these activities. These findings were similar to those of Suwanno (2003) which pointed out that other caregiving responsibility of secondary caregivers.

Strain from Direct Care

In this study, the subjects had strain from direct care at a rather low level (mean = 89.38; SD = 36.251; Skewness = 1.029) (see Table 7). Likewise, Navarat (2002), Sangboon (2002) and Songwattanayuth (2002) had the same findings. This means that caregivers felt that caregiving duty caused them little difficulty even though 85.5% of the patients had a moderate or high level of dependence. In contrast, Sheehan, and Nuttal (1988) found that the amount of care was an indicator of stress of caregivers. One plausible explanation is that 63.4% of the subjects were children of the patients, and they felt that providing care of the ill parents was one way to repay what they had done for them when they were young. This belief, coupled with the love and concern they had for the patients, made the subjects felt that caregiving was not a difficulty in life (Wongjunlongsil, 1999).

At the same time, one-quarter of the subjects had previous experience giving to a patient, and 26.7% had previous knowledge on how to perform caregiving. Evidently, the experience and knowledge they had would help further develop their caregiving ability and help them adjust their role (Narayan et al., 2001; Sparks et al., 1998; Suwanno, 1997). This made them confident in doing different activities for the patients. This can be seen from the findings that the subjects experienced only a little difficulty when helping the patients who were in pain or exhausted (mean = 1.81 and 1.85, respectively) or when preventing infections (mean = 1.92) and others. (see Appendix D). This may have made the subjects felt that they had a low level of strain from care. In addition to this, 71% of the subjects received help from other family members, so they did not experience too much difficulty performing caregiving. Such findings supported the findings of previous studies conducted by Boonrayong (2000), Caffrey (1992), Natechang (2002), Navarat (2002), Perkdetch (2002), Rakhanam (2000), Sasat (2000), Srithares (2003) and Tangchoorat (2000)

However, when considering each aspect of strain from direct care, it was found that the subjects had difficulty dealing with dementia and changing behaviors of the patients at a level similar to other aspects of care including personal care, mobility, and protection from harms (see Table 7). Again, the findings supported the findings of previous studies (Browning, and Schwirian, 1994; Clark, 2003; Haley et al., 1987; Kuaprom, 1999; Sasat, 2000; Sirapo-ngam, 1994).

The aspect of care with which the subjects had the lowest level of difficulty was emotional support and little extra tasks (see Table 7), including running errands related to law and legal actions (mean = 1.33; SD = 0.72), helping with detailed work (mean = 1.34; SD = 0.84), helping with the use of telephone (mean = 1.39; SD = 0.71), doing leisure activities with the patients (mean = 1.39; SD = 0.63), and helping with trivial matters (mean = 1.41; SD = 0.75). This may be because these aspects of care could be dealt with rather easily and other family members could assist the primary caregivers, hence a rather low level of strain from direct care.

Rewards of Caregiving

The findings of this study revealed that the subjects had a rather high level of rewards of caregiving (mean = 64.23; SD = 22.28; Skewness = -0.487) (see Table 8). Such findings indicated that the subjects had a rather positive attitude toward caregiving duty. This offered support to the findings of Kuaprom (1999), Sangboon (2002), Songwattanayuth (2002), and Srithares (2003). This may be because most of the subjects were either children or spouses of the patients. It is generally believed that taking care of sick parents or spouses is an admirable thing to do. In this study, the children subjects indicated that providing care was one way to show their gratitude to their parents (mean = 2.94; SD = 1.28) and to repay what their parents had done for them (mean = 2.82; SD = 1.21). At the same time, the subjects who were spouses of the patients felt that it was a chance to share their loved ones' sufferings (mean = 2.71; SD = 1.20), to better the patients' quality of life (mean = 2.72; SD = 1.07), and to make merits (mean = 2.48; SD = 1.81), making the subjects felt that they themselves were valuable to the patients (mean = 2.64, SD = 1.61), that they could be proud of themselves (mean = 2.41; SD = 1.35) and that they did the right thing. Likewise, Walker et al. (1992) found that these positive feelings and attitudes were spiritual rewards caused by caregiving, making the caregivers had more motivation to continue their caregiving duty.

Also, like the findings of previous studies (Kespichayawattana, 1999, Sangboon, 2002; Srithares, 2003) the subjects felt that they received financial rewards the least (see Table 8). This may be because the subjects performed caregiving out of their feeling of responsibility and their love and attachment for the patients. On top of this, the subjects did not have financial problems, as 41.1% of them indicated that they had sufficient amount of income with no savings and 40.1% had sufficient income with savings (see Table 3). For this reason, they did not have any expectation for payment for their care. Instead, they saw the money or gifts they received from other family members as the token of appreciation; thus, they assessed financial rewards as the least important (mean = 0.41; SD = 0.80).

Communication Problems

In this study, it was found that the subjects perceived that communication problems with the patients were at a low level (mean = 7.52; SD = 4.23; Skewness = 0.854) (Table 9). This was congruent with the findings of a previous study conducted by Perkdeth (2002), thus indicating that the subjects did not have much difficulty communicating with the patients. One reason may be that more than half of the elderly patients with dementia in this study (61.2%) were still in the first phase of the disease (the first four years) (Table 5), so the progression of their condition was still gradual, with only mild to moderate severity (Panthumjinda, 2000). Thus, most of the patients still had not had much speech impairment. Also, the caregiver subjects received knowledge on how to stimulate the patients' memory (Table 4), so they were able to develop skills to communicate with the patients. For this reason, they felt that they did not have many communication problems with the subjects.

When considering each aspect of communication problems, memory and understanding seemed to be the most problematic (Table 9). This supported the findings of Hendryx-Bedalov (2000). This may be because most of the patients (91.1%) had impaired thought and decision making, so they were unable to gather their thoughts or use logic to solve problems like they used to (Thanyakitpaisal, 2001). Also, 87.8% of the patients had problems with their memory and became forgetfulness, so they tended to be unable to remember past events or previous conversations. Thus, they may ask the same questions repeatedly, making the caregiver subjects give the answer again and again.

The second most problematic aspect was speech (mean = 2.83; SD = 2.11) (Table 9). This was congruent with the findings of Boonrayong (2000) and Sasat (2000). In this study, about half, or 54.4%, of the patient subjects did not experience stuttering, difficulty speaking, or total inability to speak. Only some of the patient subjects had language impairment such as inability to name objects. However, as the family caregiver subjects had a close relationship with the patients as they were mostly children or spouses (Table 3), they were still able to understand the messages the patients were trying to convey or to guess the patients' needs. As a result, they did not have too much difficulty.

The subjects had the least hearing problems (Table 9) as in this study there were only nine patients who were hearing impaired. However, they dealt with the situation by using hearing aids or speaking more loudly and closely.

Health Status of Family Caregivers

The findings of the study revealed that the mean score of health status was rather high (mean = 2467.89; SD = 506.39; Skewness = -.0374) (Table 9). This meant that most of the subjects had perceived health status at a fairly good level. Similarly, Natechang, (2002) and Navarat (2002) had the same findings. This may be because most of the subjects had other people who helped take turn taking care of the patients (Table 4). Thus, they had time for themselves to rest or do other activities outside the house. For this reason, the caregiver subjects had chances to have recreational activities and release their stress with others in their social circle, and they had less stress and were empowered to continue their caregiving duty (Rakhanam, 2000). In addition to this, as the largest group of subjects graduated from university (Table 3), they may have had skills necessary in seeking information sources and utilizing different resources. Therefore, they were able to correctly or almost correctly estimate the situation, while at the same time using knowledge and skills to solve problems effectively. Besides, more than half of the caregiver patients were married (54.4%), so they had a network to support them—listening to their problems and giving them advice (Navarat, 2002; Sasat, 2000). Thus, the subjects may not have felt lonely and had less stress (Table 4). Thus, the subjects perceived their health status at a good level (mean = 42.50; SD = 21.39), which was not different from the previous three months (see Appendix D).

However, the findings revealed that 40% of the subjects used to have health problems (Table 5), so they had a risk to have more health problems. This was evidenced by the fact that 73.3% of the subjects experienced some health problems during their caregiving duties including stress, anxiety, aching, moody, headache or dizziness, sleeplessness, and exhaustion. The findings were like those of previous studies (Clark, 2003; Natechang, S., 2002; Navarat, W., 2001; Sasat, S., 1999), which could reflect their chronic stress. Thus, the health status of caregivers should be taken into account, especially those who already have health problems.

Factors Predicting Health Status of Family Caregivers

The findings of this study revealed that strain from direct care was negatively related to health status of family caregivers ($r = -.471$, $p < .01$) (Table 10), and it could predict health status of family caregivers by 22% (Table 11). Thus, the research hypothesis was supported; indicating that strain from direct care affected the health status of caregivers. Likewise, Baumgarten et al. (1992), Hooker et al. (2002), and Navarat (2002) found that the more strain the family caregivers have, the more their health would be adversely affected. For instance, the difficulty carrying or supporting the patients while walking can cause physical exhaustion or aching. At the same time, family caregivers need to be patient in dealing with different abnormal behaviors of the patients such as hiding things, losing sleep, or being dysfunctional. Thus, family caregivers have less time to perform self-care or rest, and the resulting stress or strain can affect their immunity (Kiecolt-Glasser et al., 1991). For this reason, family caregivers can easily become ill. In addition to this, dementia gradually progresses and the effects of dementia could only be worsened. This required continuous time, energy, and effort of the family caregivers and the strain from such demanding caregiving duties can negatively affect family caregivers' physical and emotional well being. In brief, strain from direct care is one factor affecting family caregivers' adaptation and can result in health problems of family caregivers.

As regards communication problems, the findings revealed that communication problems were negatively related to the health status of family caregivers ($r = -.417$, $p < .01$) (Table 10), and could predict the health status of family caregivers by another 5.4%, totaling 27.4% ($R^2 = .274$, $F_{(2,87)} = 16.429$, $p < .01$) (Table 11). Thus, the research hypothesis was supported. This means that the more communication problem, the worse the family caregivers' health status. This finding was similar to the findings of Boonrayong (2000) and Sasat (2000). This is because when family caregivers are unable to communicate with or understand the patients, they need to spend time and make efforts to communicate or understand what the patients need or express, resulting in stress. This can be seen from the finding that communication problems were positively associated with strain from direct care (r = .454, p < .01), thus affecting the health status of family caregivers.

As for amount of care, it was discovered that amount of care was not related to the health status of family caregivers (r = -.144, p > .05). Thus, it could not predict family caregivers' health status, and the research hypothesis was not supported. In other words, amount of care, regardless of extent, did not have an effect on family caregivers' health status. This finding disagreed with that of Perkdetch (2002) which indicated that the large amount of care led to a high level of strain and resulted in health problems. This may be because amount of care alone is not a cause of strain, but difficulty in caregiving is (Oberst, Thomas, Gass, and Ward, 1989). Besides, as amount of care had a rather high partial correlation coefficient with strain from direct care (r = .629, p < .01) (Table 10), when the influential effect of the strain from direct care variable was eliminated, amount of care was not related to the health status and could not predict the health status of family caregivers.

Finally, the findings revealed that rewards of caregiving was not associated with health status of family caregivers (r = .099, p > .05). Consequently, it could not predict family caregivers' health status. Thus, the research hypothesis was not supported. This means that no matter how the subjects felt about caregiving, their health status would not be affected. This supported the finding of Srithares (2002). One plausible explanation is that the subjects in this study were rather homogenous when it came to their characteristics. That is, more than three-quarters were female (78.9%), 63.4% were children of the patients, and 73.3% were between 30 and 60 years old. Therefore, they did not differ when it came to their positive feelings resulting from performing caregiving duty. Thus, rewards of caregiving were not associated with their health status.

In conclusion, the findings of the present study suggested that strain from direct care and communication problems with the patients could co-predict family caregivers' health status by 27.4%, whereas amount of care and rewards of caregiving could not. Therefore, the research hypothesis was only partially supported.

CHAPTER VI

CONCLUSION

This descriptive study aimed at investigating factors influencing health status of family caregivers of elderly patients with dementia based on the conceptual framework of Lazarus and Folkman (1984). The subjects were 90 primary caregivers who continuously provided care to elderly patients with dementia at home for at least three months , unpaid caregivers. They also took the elderly patients with dementia to receive treatments at the out-patient department of King Chulalongkorn Memorial Hospital and the Prasat Neurology Institute between January to June 2004. The instruments used in data collection were composed of the demographic characteristics questionnaire, the amount of care questionnaire (with reliability of 0.87), the strain from direct care questionnaire (with the reliability of 0.93), the rewards of caregiving questionnaire (with the reliability of 0.94), the communication problems questionnaire (with the reliability of 0.73), and the SF-36 health survey questionnaire (with the reliability of 0.93). During data collection, 68 subjects were orally interviewed by the researcher, while 22 of them completed the questionnaires by themselves. As for data analysis, descriptive statistics, Pearson's product moment correlation, and multiple regression analysis were employed.

Conclusion

The findings of the study revealed that the subjects ranged in age from 24 to 78 years, with the average age of 51.82 years. More than three-quarters (78.9%) were female, and more than one-quarter (32.3%) were college graduates. In addition, almost all of the subjects (94.5%) were Buddhists, 63.4% of the family caregivers were the children of the elderly patients with dementia, and 53.3% worked to earn their living. As for financial status, close to two-thirds (64.4%) had an average monthly income between 10,001 and 45,000 baht and 81.2% had adequate income. Regarding caregiving, the subjects had been providing care to the elderly patients with dementia for 3 months to 11 years, with the average of 3.86 years. The average number of hours providing care to the patients was 12.78 hours per day. With regard to the subjects' health status, 60% of them did not have any health problem before beginning their caregiving responsibility, and 73.3% had experienced health problems after performing care including stress, anxiety, aching, moody, headache or dizziness, sleeplessness, and exhaustion. Furthermore, close to three-fourths of the subjects (71.1%) had other people who assisted with caregiving, most of whom were their own children. The subjects indicated that they had become caregivers because they thought it was their responsibility (47.7%) and because they were unemployed (28.8%). In addition to this, approximately three-quarters (74.5%) did not have to care for any individual other than the elderly patients with dementia, and 64.5% had a low level of stress.

When considering the elderly patients with dementia, it was discovered that they were from 60 to 90 years old, and the average age was 77.72 years. As for their diagnosis, 45.6% had Alzheimer's disease and 44.4% suffered from vascular dementia. Moreover, three-quarters of the elderly patients with dementia (75.6%) had co-morbidity, including hypertension, diabetes mellitus, heart disease, stroke, and hyperlipidemia, respectively. In terms of their dependence, 43.3% and 42.2% had a moderate level and a high level of dependence, respectively. Finally, 91.1% had impairment of thought and decision making, 87.7% had impaired memory , and 45.6% had impaired speech.

Besides, most of the elderly patients had a rather high level of perceived amount of care (mean = 46.16; SD = 10.36; skewness = -.012), while they had a rather low level of strain from direct care and communication problems (mean = 89.38; SD = 36.251 for the former, and mean = 7.52; SD = 4.23 for the latter). Furthermore, they had a rather high level of perceived rewards of caregiving (mean = 64.23; SD = 22.28) and a rather good level of perceived health status (mean = 2467.89; SD = 506.398).

When analyzing the relationships, the findings indicated that strain from direct care and communication problems were negatively related to health status of family caregivers (r = -.471, p < .01 and r = -.417, p < .01, respectively). On the other hand, there was no statistically significant relationship between amount of care and rewards of caregiving and health status (r = -.144, p > .05 and r = .099, p > .05, respectively). Multiple regression analysis also suggested that strain from direct care could predict family caregivers' health status by 22%, while communication problems could predict family caregivers' health status by another 5%, altogether accounting for 27.4%,

Implications and Recommendations

The findings of this study led to a conclusion that family caregivers of elderly patients with dementia obviously suffered from health problems occurring during their caregiving duties. In addition, strain from direct care and communication problems could co-predict the health status of family caregivers. Therefore, reducing the stress caused by caregiving and communication problems to promote health of the caregivers are deemed important as it could enable family caregivers to effectively maintain their roles. Based on the findings of the study, the following recommendations are then made:

Implications for Nursing Practice

1. Nurses should assess the health status of family caregivers who provide care to elderly patients with dementia at home so as to devise a plan to reduce the risks and prevent health problems especially those who have health problems before performing the caregiving duties, those who have difficulty performing their roles, and those who have trouble communicating with the elderly patients with dementia.

2. Nurses and healthcare team members involved should work together collaboratively to find ways to provide assistance to family caregivers including offering consultation services, giving them a chance to ask questions and share their problems, providing spiritual support and increasing family caregivers' positive attitudes toward the patients and caregiving, and teaching them how to deal with different problems of the patients such as behavioral adjustment, promotion of communication skills. Assistance can also be offered in the form of the organization of the Day Care Project, Respite Service, or Volunteer Recruitment in the Community to help care for the patients at home and to offer aids to family caregivers who have no help so as to reduce amount of care and strain from direct care. Such efforts are

expected to enable family caregivers to have some breaks from their responsibilities to wind down or to join other health promoting programs.

Implications for Nursing Education

The development of the curricula in the continuing education or the graduate programs or the program for specialists in caregiving of elderly patients should undergo training to equip them with knowledge and skills necessary in providing care of elderly patients with dementia such as how to promote communication skills, how to stimulate memory, and how to adjust the patients behaviors to develop their services to reduce the stress and communication problems faced by family caregivers. Furthermore, nurses should take both the patients themselves and their family caregivers into careful consideration. In particular, emphases should be placed on health status of family caregivers, with nursing students trained to assess and evaluate different factors which can affect the family caregivers' health status including strain from direct care or communication problems. This will help make nursing planning better promote health of family caregivers.

Implications for Further Research

1. The findings of the study showed that perceived strain from direct care partly resulted from perceived self-efficacy, health status before caregiver role and stress coping strategies. Thus, these factors should be further investigated in detail to shed light on the information necessary in understanding and expanding the existing body of knowledge regarding caregiving situations, stress, and stress coping strategies of family caregivers of elderly patients with dementia.

2. The outcomes and the effectiveness of various programs used with elderly patients with dementia should be explored including stimulation of memory, communication skill development, adjustment of patients' behavior caused by stress, and health problems of family caregivers.

3. As the subjects in the study were rather homogeneous in terms of age, gender, and source of information, all were factors influencing family caregivers'

health status, further studies should include various groups of subjects with heterogeneous characteristics to generalize the findings to a wider group of population.

4. The level of thought or decision and memory impairment of elder patients with dementia should be assess by objective instruments such as MMSE or MBPC.

Limitations of the Study

The findings of this study cannot be generalized to other groups of family caregivers who provide care to elderly patients with dementia as the subjects were not recruited by means of random sampling.

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APPENDIX

APPENDIX A
Questionnaires

แบบบันทึกข้อมูลส่วนบุคคลทั่วไป

ข้อมูลส่วนบุคคลของผู้ป่วย

คำชี้แจง โปรดทำเครื่องหมาย / ลงใน ☐ หรือเติมคำลงในช่องว่าง สำหรับผู้วิจัย

1. อายุ ……….. ปี ☐

2. เพศ ☐

☐ หญิง ☐ ชาย

3. สถานภาพสมรส ☐

☐โสด ☐ คู่ ☐ ม่าย ☐ หย่า, แยกกันอยู่

4. ศาสนา ☐

☐ พุทธ ☐ คริสต์ ☐ อิสลาม ☐ อื่นๆระบุ……..

5. การวินิจฉัยโรค ☐

☐ Alzheimer’s disease

☐ Parkinson ’s disease with dementia

☐ Vascular dementia

☐ อื่นๆ

6. ระยะเวลาการเจ็บป่วย ……….. ปี ……. เดือน ☐

7. ระดับการพึ่งพาของผู้ป่วย ☐

☐ น้อย ☐ ปานกลาง ☐ มาก

8. ความสามารถในการคิดและสื่อสารของผู้ป่วย (ตามการรับรู้ของญาติผู้ดูแล)

ความจำ	☐ ดี	☐ เสื่อม	☐ จำไม่ได้เลย	☐
การพูด	☐ ปกติ	☐ ลำบาก	☐ ไม่ได้เลย	☐
การคิดและตัดสินใจ	☐ ปกติ	☐ ช้าลง	☐ ไม่ได้เลย	☐

9. โรคอื่นๆที่พบร่วม ………………………………………………………………………………

10. ค่าใช้จ่ายในการรักษา

☐ จ่ายเอง ☐ เบิกจากต้นสังกัด ☐ บัตรทอง 30 บาท ☐ อื่นๆ ระบุ………

ข้อมูลส่วนบุคคลของญาติผู้ดูแล สำหรับผู้วิจัย

1. อายุ ……… ปี ☐

2. เพศ ☐ หญิง ☐ ชาย ☐

3. สถานภาพสมรส ☐

☐ โสด ☐ คู่ ☐ ม่าย ☐ หย่า, แยกกันอยู่

4. ศาสนา ☐

☐ พุทธ ☐ คริสต์ ☐ อิสลาม ☐ อื่นๆระบุ……..

5. ความสัมพันธ์กับผู้ป่วย ☐

☐ ภรรยา ☐ สามี ☐ ลูกสาว

☐ ลูกชาย ☐ ลูกสะใภ้ ☐ หลาน

อื่นๆ ระบุ………………………………………..

6. ระดับการศึกษา ☐

☐ ไม่ได้เรียนหนังสือ ☐ ประถมศึกษา

☐ มัธยมศึกษา ☐ อนุปริญญาหรือประกาศนียบัตร

☐ ปริญญาตรี ☐ สูงกว่าปริญญาตรี

7. ขณะนี้ท่านทำงานหรือไม่ ☐

☐ ทำ อาชีพ (ระบุ) …………………………………..

☐ ทำเป็นบางวัน ☐ ทำเป็นงานประจำ

☐ ไม่ได้ทำ

☐ ว่างงาน ☐ เกษียณแล้ว

☐ กำลังหางานทำ ☐ หยุดทำงานเพราะต้องดูแลผู้ป่วย

☐ อื่นๆ ระบุ …………………………………

8. รายได้ของครอบครัว …………………….. บาท/เดือน ☐

9. ความเพียงพอของรายได้ ☐

☐ ไม่เพียงพอ และมีหนี้สิน ☐ ไม่เพียงพอ แต่ไม่มีหนี้สิน

☐ เพียงพอต่อเดือน ไม่เหลือเก็บ ☐ เพียงพอ และมีเหลือเก็บ

10. ระยะเวลาในการดูแลผู้ป่วย …………. ปี ………. เดือน ☐

11. ระยะเวลาที่ใช้ดูแลต่อวัน ……….. ชั่วโมง ☐

12. ประสบการณ์การดูแลผู้ป่วย ☐

☐ ไม่มี ☐ มี ระบุประเภทผู้ป่วย…………………….

13. ผู้ช่วยเหลือในการดูแลที่บ้าน ☐

☐ ไม่มี ☐ มี ระบุ ……………………………………

14. ปัญหาสุขภาพเดิมก่อนดูแลผู้ป่วย

☐ ไม่มี ☐ มี ระบุ ……………………………………

15. ปัญหาสุขภาพของผู้ดูแลที่เกิดระหว่างการดูแลผู้ป่วย ☐

☐ ไม่มี ☐ มี ระบุ ……………………………………

16. เหตุผลในการเข้ารับบทบาทเป็นผู้ดูแล…………………………………………………………

……………………………………………………………………………………………………

17. นอกเหนือจากการดูแลผู้ป่วยแล้ว ท่านต้องให้การดูแลคนอื่นๆ ด้วยหรือไม่ ☐

☐ ไม่มี ☐มี ระบุ ………………………………………………

18.ระดับความเครียดของท่านในระหว่างการทำหน้าที่ดูแลผู้ป่วยเท่ากับ …………………………..

(ถ้าเทียบระดับคะแนนตั้งแต่ 0 –10 โดยที่ 0 คือท่านไม่มีความเครียดเลย และ 10 คือ ท่านมีความเครียดมากที่สุด)

แบบวัดความเครียดจากการดูแลโดยตรง

ข้อคำถามชุดนี้ ต้องการทราบเกี่ยวกับกิจกรรมที่ท่านให้การดูแลผู้ป่วยสูงอายุสมองเสื่อม ในช่วงระยะเวลา 3 เดือนที่ผ่านมา ขอให้ท่านวงกลมคำว่า “ไม่” ถ้าท่านไม่ได้ให้ความช่วยเหลือหรือดูแลผู้ป่วยในข้อนั้น และวงกลมคำว่า “ใช่” ถ้าท่านให้การช่วยเหลือหรือดูแลผู้ป่วยในข้อนั้น ถ้าตอบว่า “ใช่” ขอให้ระบุด้วยว่าความช่วยเหลือหรือการดูแลผู้ป่วยในข้อนั้นมีความยากลำบากมากน้อยเพียงใด โดยจะมีระดับความยากลำบากจาก 5 = ยากมากหรือลำบากมาก, 4 = ยากหรือลำบาก, 3 = ค่อนข้างยากหรือค่อนข้างลำบาก, 2 = ไม่ค่อยยากหรือไม่ค่อยลำบาก, 1 = ไม่ยากหรือง่าย

ท่านให้การช่วยเหลือผู้ป่วยในเรื่องต่อไปนี้หรือไม่	**ไม่**	**ใช่**	**ยากมาก**	**ยาก**	**ค่อนข้างยาก**	**ไม่ค่อยยาก**	**ไม่ยาก**	สำหรับผู้วิจัย
1. ซื้อของหรือทำธุระให้กับผู้ป่วย	ไม่	ใช่	5	4	3	2	1	
2. ช่วยผู้ป่วยในการเดินในบ้านหรือนอกบ้าน	ไม่	ใช่	5	4	3	2	1	
3. เฝ้าระวังผู้ป่วยเพื่อให้แน่ใจว่าผู้ป่วยปลอดภัย	ไม่	ใช่	5	4	3	2	1	
4. ………………………	ไม่	ใช่	5	4	3	2	1	
5. ………………………	ไม่	ใช่	5	4	3	2	1	
6. ………………………	ไม่	ใช่	5	4	3	2	1	
7. ………………………	ไม่	ใช่	5	4	3	2	1	
8. ………………………	ไม่	ใช่	5	4	3	2	1	
. ………………………..	ไม่	ใช่	5	4	3	2	1	
…. ……………………..	ไม่	ใช่	5	4	3	2	1	
…. ……………………..	ไม่	ใช่	5	4	3	2	1	
….. ……………………..	ไม่	ใช่	5	4	3	2	1	
76. ช่วยผู้ป่วยในการปฏิบัติกิจทางศาสนา เช่น ไปวัด	ไม่	ใช่	5	4	3	2	1	
77.ช่วยกระตุ้นให้ผู้ป่วยเริ่มมีกิจวัตรประจำวัน	ไม่	ใช่	5	4	3	2	1	

แบบวัดปัญหาการสื่อสาร

ข้อคำถามชุดนี้ ต้องการทราบเกี่ยวกับปัญหาการติดต่อสื่อสารระหว่างท่านกับผู้ป่วยสูงอายุสมองเสื่อมในช่วงระยะเวลา 3 เดือนที่ผ่านมา เกี่ยวกับการได้ยิน การพูด และความจำ ซึ่งมักจะเป็นอุปสรรคต่อความเข้าใจ หรือ การสื่อสารกับท่านหรือกับบุคคลอื่นๆ ขอให้ท่านอ่านแต่ละข้อความแล้วทำเครื่องหมาย √ ลงในช่อง ☐ หน้าคำตอบที่ตรงกับปัญหาการสื่อสารระหว่างท่านกับผู้ป่วยมากที่สุด โดย

ไม่เลย หมายถึง ท่านไม่มีความยากลำบากในการสื่อสารกับผู้ป่วยระหว่างให้การดูแลเลย
น้อย หมายถึง ท่านมีปัญหาในการสื่อสารกับผู้ป่วยน้อย
ค่อนข้างมาก หมายถึง ท่านมีปัญหาในการสื่อสารกับผู้ป่วยค่อนข้างมาก
มาก หมายถึง ท่านมีปัญหาในการสื่อสารกับผู้ป่วยมาก
มากที่สุด หมายถึง ท่านมีปัญหาในการสื่อสารกับผู้ป่วยมากที่สุด

1. ผู้ป่วยมีปัญหาเรื่องการได้ยินมากน้อยเพียงใด ? สำหรับผู้วิจัย

☐ ไม่เลย……………….. (ไปตอบข้อ 2) ☐
☐ น้อย………………….
☐ ค่อนข้างมาก…………
☐ มาก………………….
☐ มากที่สุด…………….
ตอบข้อ 1 ก.

1 ก. ปัญหาการได้ยินของผู้ป่วย ทำให้ท่านมีความลำบากในการดูแลมากน้อยเพียงใด ? ☐

☐ ไม่เลย ☐ น้อย ☐ ค่อนข้างมาก ☐ มาก ☐ มากที่สุด

2. ………………………………………………………………………………. ☐

3. ผู้ป่วยมีปัญหาในด้านการจำหรือเข้าใจสิ่งที่ท่านพูดมากน้อยเพียงใด ? ☐

☐ ไม่เลย………………
☐ น้อย ………………
☐ ค่อนข้างมาก………..
☐ มาก………………..
☐ มากที่สุด…………..
ตอบข้อ 3 ก.

3 ก. ปัญหาเรื่องความจำ หรือ ความเข้าใจของผู้ป่วย ทำให้ท่านมีความยากลำบากในการดูแลมากน้อยเพียงใด ? ☐

☐ ไม่เลย ☐ น้อย ☐ ค่อนข้างมาก ☐ มาก ☐ มากที่สุด

แบบวัดรางวัลจากการดูแล

การดูแลผู้ป่วยเป็นงานที่ต้องใช้เวลาและความอดทน แต่ก็อาจมีสิ่งที่ดีๆอยู่บ้าง ข้อคำถามต่อไปนี้เป็นสิ่งที่ท่านได้รับจากการดูแลผู้ป่วยว่าการดูแลผู้ป่วยช่วยให้ท่านเกิดความรู้สึกที่ดีในการดูแลมากน้อยเพียงใด ในแต่ละข้อคำถามไม่มีคำตอบที่ถูกหรือผิด ขอให้ท่านตอบตรงตามความเป็นจริงที่เกิดกับท่านในช่วงระยะเวลา 3 เดือนที่ผ่านมา โดยทำเครื่องหมาย √ ลงในช่องที่ตรงกับระดับความรู้สึกของท่านมากที่สุด

ข้อความ	**ไม่เลย**	**เล็กน้อย**	**ค่อนข้างมาก**	**มาก**	**มากที่สุด**	สำหรับผู้วิจัย
1. การดูแลผู้ป่วยช่วยให้ท่านรู้สึกว่าท่านได้ทำความดี						
2. การดูแลผู้ป่วยช่วยให้ท่านเข้าใจตัวท่านเองเมื่อต้องเจ็บป่วย						
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……………………………………						
……………………………………						
……………………………………						
……………………………………						
27. การดูแลผู้ป่วยช่วยให้ท่านดูแลสุขภาพของตนเองดีขึ้น						
28. การดูแลผู้ป่วยช่วยให้ท่านชื่นชมหรือภาคภูมิใจคนในครอบครัว						

แบบวัดภาวะสุขภาพของญาติผู้ดูแล

จากการดูแลผู้สูงอายุที่มีภาวะสมองเสื่อม กรุณาอ่านคำถามต่อไปนี้แล้วพิจารณาว่าภาวะสุขภาพของท่านเป็นอย่างไร โดยทำเครื่องหมาย √ ลงใน ☐ ที่ตรงกับภาวะสุขภาพของท่านมากที่สุด

1. โดยทั่วๆ ไปสุขภาพของท่านเป็นอย่างไร สำหรับผู้วิจัย

☐ ดีมากที่สุด ☐ ดีมาก ☐ ดี ☐ พอใช้ ☐ แย่ ☐

2. ภาวะสุขภาพของท่านโดยทั่วไปในปัจจุบันนี้เป็นอย่างไรเมื่อเปรียบเทียบกับ 2-3 เดือนที่แล้ว

☐ ดีกว่า 2-3 เดือนที่แล้วมาก ☐

☐ ค่อนข้างดีกว่า 2-3 เดือนที่แล้ว

☐ เหมือน 2-3 เดือนที่แล้ว

☐ ค่อนข้างแย่กว่า 2-3 เดือนที่แล้ว

☐ แย่กว่า 2-3 เดือนที่แล้วมาก

กรุณาอ่านข้อความต่อไปนี้ แล้วพิจารณาว่าภาวะสุขภาพของท่านในปัจจุบันนี้ จำกัดการทำกิจกรรมต่อไปนี้หรือไม่ ถ้าจำกัด จำกัดมากน้อยเพียงใด โดยทำเครื่องหมาย √ ลงใน ☐ ที่ตรงกับระดับความจำกัดของท่าน

กิจกรรม	**ใช่ จำกัด มาก**	**ใช่ จำกัด เล็กน้อย**	**ไม่ จำกัด เลย**	สำหรับ ผู้วิจัย
3. กิจกรรมที่ออกแรงมาก เช่น การวิ่ง การยกของหนัก การเล่นกีฬาอย่างหนัก				
…………………………………………………………………….				
……………………………………………………………………				
……………………………………………………………………				
…………………………………………………………………….				
……………………………………………………………………				
12. อาบน้ำ หรือแต่งตัว				

กรุณาอ่านข้อความต่อไปนี้ แล้วพิจารณาว่า <u>ในระหว่าง 1 เดือนที่ผ่านมา</u> ท่านมีปัญหาเกี่ยวกับการทำงาน หรือการปฏิบัติกิจวัตรประจำวัน ซึ่งเป็นผลมาจากสุขภาพด้านร่างกายของท่านหรือไม่ ถ้ามี บ่อยครั้งเพียงใด โดยทำเครื่องหมาย √ ลงใน ☐ ที่ตรงกับระดับปัญหาของท่าน

ข้อความ	**ตลอดเวลา**	**เป็นส่วนมาก**	**เป็นบางครั้ง**	**นานๆ ครั้ง**	**ไม่เลย**	สำหรับผู้วิจัย
13. ลดปริมาณเวลาในการทำงานหรือกิจกรรมอื่นๆ ลง						
……………………………………………						
…………………………………………..						
16. มีความลำบากที่จะทำงาน หรือกิจกรรมอื่นๆ (เช่น ต้องใช้ความพยายามมากขึ้นกว่าเดิม)						

กรุณาอ่านข้อความต่อไปนี้ แล้วพิจารณาว่า <u>ในระหว่าง 1 เดือนที่ผ่านมา</u> สภาพทางด้านอารมณ์ของท่าน เช่น รู้สึกซึมเศร้าหรือกังวล ทำให้ท่านมีปัญหาเกี่ยวกับการทำงาน หรือการปฏิบัติกิจวัตรประจำวัน บ่อยครั้งเพียงใด โดยทำเครื่องหมาย √ ลงใน ☐ ที่ตรงกับระดับปัญหาของท่าน

ข้อความ	**ตลอดเวลา**	**เป็นส่วนมาก**	**เป็นบางครั้ง**	**นานๆ ครั้ง**	**ไม่เลย**	สำหรับผู้วิจัย
17. ลดปริมาณเวลาในการทำงานหรือกิจกรรมอื่นๆ ลง						
…………………………………………….						
……………………………………………..						

20. <u>ในระหว่าง 1 เดือนที่ผ่านมา</u> ปัญหาภาวะสุขภาพทางร่างกาย และอารมณ์ของท่านเป็นอุปสรรคต่อการเข้าร่วมกิจกรรมทางด้านสังคมตามปกติกับครอบครัว เพื่อน เพื่อนบ้าน หรือกลุ่มต่างๆ มากน้อยเพียงใด ☐

☐ ไม่เลย ☐ เล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

21. ……………………………………..………………………………………………..…………

22. ………………………………………………………………………………………………

กรุณาอ่านข้อคำถามต่อไปนี้ ซึ่งถามเกี่ยวกับความรู้สึกของท่านและสิ่งที่เกิดขึ้น ระหว่าง 1 เดือนที่ผ่านมา แล้วทำเครื่องหมาย √ ลงใน ☐ ที่ตรงหรือใกล้เคียงกับความรู้สึกของท่านให้มากที่สุด

ข้อความ	**ตลอดเวลา**	**เป็นส่วนมาก**	**เป็นบางครั้ง**	**นานๆ ครั้ง**	**ไม่เลย**	สำหรับผู้วิจัย
23. ท่านรู้สึกมีชีวิตชีวา						
……………………………………………						
……………………………………………						
……………………………………………						
31. ท่านรู้สึกอ่อนเพลีย						

32. ในระหว่าง 1 เดือนที่ผ่านมา ปัญหาทางสุขภาพและอารมณ์ของท่านเป็นอุปสรรคในการทำกิจกรรมทางด้านสังคม เช่น ไปเยี่ยมเพื่อน/ญาติ มากน้อยเพียงใด ☐

☐ ตลอดเวลา ☐ เป็นส่วนมาก ☐ เป็นบางครั้ง ☐ นานๆ ครั้ง ☐ ไม่เลย

กรุณาอ่านข้อความต่อไปนี้แล้วพิจารณาว่าถูกหรือผิดโดยทำเครื่องหมาย √ ลงใน ☐ ที่ตรงกับความรู้สึกของท่านมากที่สุด

ข้อความ	**ถูกต้องทุกประการ**	**ถูกต้องเป็นส่วนใหญ่**	**ไม่ทราบว่าถูกหรือผิด**	**ไม่ถูกต้องเป็นส่วนใหญ่**	**ไม่ถูกต้องเลย**	สำหรับผู้วิจัย
33. ฉันเจ็บป่วยง่ายกว่าคนทั่วไป						
……………………………………………						
36. ฉันรู้สึกว่าสุขภาพของฉันดีเยี่ยม						

APPENDIX B

Consent Form

แบบฟอร์มการยินยอมและพิทักษ์สิทธิ์ผู้เข้าร่วมวิจัย

ดิฉันนางสาวนภาพร ฤทธีวีรกูล นักศึกษาพยาบาลปริญญาโท คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล สนใจศึกษาถึงภาวะสุขภาพของญาติที่ดูแลผู้สูงอายุที่มีภาวะสมองเสื่อม จึงใคร่ขอความร่วมมือท่านในการตอบแบบสอบถาม ถ้าหากท่านยินดีให้ความร่วมมือในการวิจัย ดิฉันขอรบกวนท่านในการตอบแบบสอบถามเกี่ยวกับข้อมูลส่วนบุคคล แบบสอบถามรางวัลจากการดูแล แบบสอบถามปัญหาในการสื่อสาร แบบสอบถามความเครียดจากการดูแล และแบบสอบถามภาวะสุขภาพ โดยใช้เวลาประมาณ 45 นาที

ในการตอบแบบสอบถามครั้งนี้คำตอบของท่านไม่มีถูกหรือผิด ข้อมูลที่ได้จะเป็นประโยชน์ต่อการพัฒนาแนวทางการพยาบาลเพื่อวางแผนช่วยเหลือญาติผู้ดูแลผู้สูงอายุที่มีภาวะสมองเสื่อมต่อไป การเข้าร่วมวิจัยในครั้งนี้จะเป็นไปด้วยความสมัครใจของท่าน ไม่ว่าท่านจะเข้าร่วมวิจัยหรือไม่ก็ตามจะไม่มีผลกระทบต่อท่านหรือการดูแลที่ผู้ป่วยจะได้รับแต่อย่างใด และหากท่านยินยอมเข้าร่วมการวิจัยแล้วเกิดเปลี่ยนใจภายหลัง ท่านมีสิทธิ์ในการถอนตัวออกจากการวิจัยได้โดยไม่มีข้อแม้ใดๆทั้งสิ้น โดยข้อมูลที่ได้จากท่านจะเป็นความลับและนำเสนอเป็นผลการวิจัยของญาติผู้ดูแลผู้สูงอายุที่มีภาวะสมองเสื่อมโดยรวม และในระหว่างการเข้าร่วมวิจัยถ้าท่านมีข้อสงสัยใดๆ ดิฉันยินดีตอบข้อสงสัยของท่านตลอดเวลา

ขอขอบคุณในความร่วมมืออย่างยิ่ง
นางสาวนภาพร ฤทธีวีรกูล

(หมายเลขโทรศัพท์ติดต่อ 01-8109927)

สำหรับผู้เข้าร่วมการวิจัย

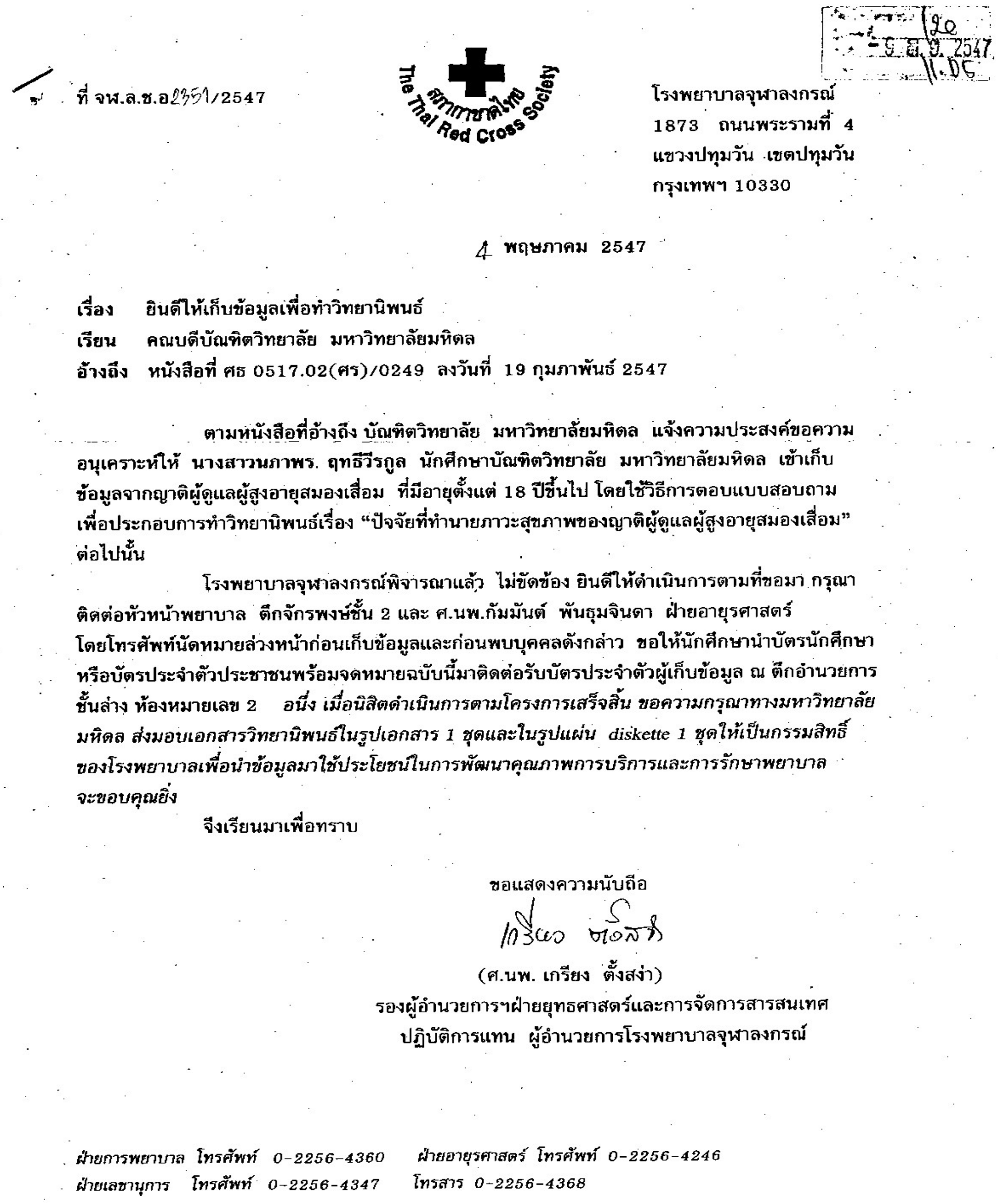
ข้าพเจ้าได้รับทราบรายละเอียดของการวิจัยดังที่อธิบายไว้ข้างต้นแล้ว มีความเข้าใจและยินดีให้ความร่วมมือในการวิจัย

ลงชื่อ ……………………………………

วันที่ ….. เดือน ………………พ.ศ. ……

APPENDIX C

Permission Letters for Data Collection



9 [illegible] 2547
๒๐
11.05

ที่ จพ.ล.ช.อ2351/2547

The Thai Red Cross Society

โรงพยาบาลจุฬาลงกรณ์
1873 ถนนพระรามที่ 4
แขวงปทุมวัน เขตปทุมวัน
กรุงเทพฯ 10330

4 พฤษภาคม 2547

เรื่อง ยินดีให้เก็บข้อมูลเพื่อทำวิทยานิพนธ์
เรียน คณบดีบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล
อ้างถึง หนังสือที่ ศธ 0517.02(ศร)/0249 ลงวันที่ 19 กุมภาพันธ์ 2547

ตามหนังสือที่อ้างถึง บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล แจ้งความประสงค์ขอความอนุเคราะห์ให้ นางสาวนภาพร. ฤทธีวีรกูล นักศึกษาบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล เข้าเก็บข้อมูลจากญาติผู้ดูแลผู้สูงอายุสมองเสื่อม ที่มีอายุตั้งแต่ 18 ปีขึ้นไป โดยใช้วิธีการตอบแบบสอบถาม เพื่อประกอบการทำวิทยานิพนธ์เรื่อง "ปัจจัยที่ทำนายภาวะสุขภาพของญาติผู้ดูแลผู้สูงอายุสมองเสื่อม" ต่อไปนั้น

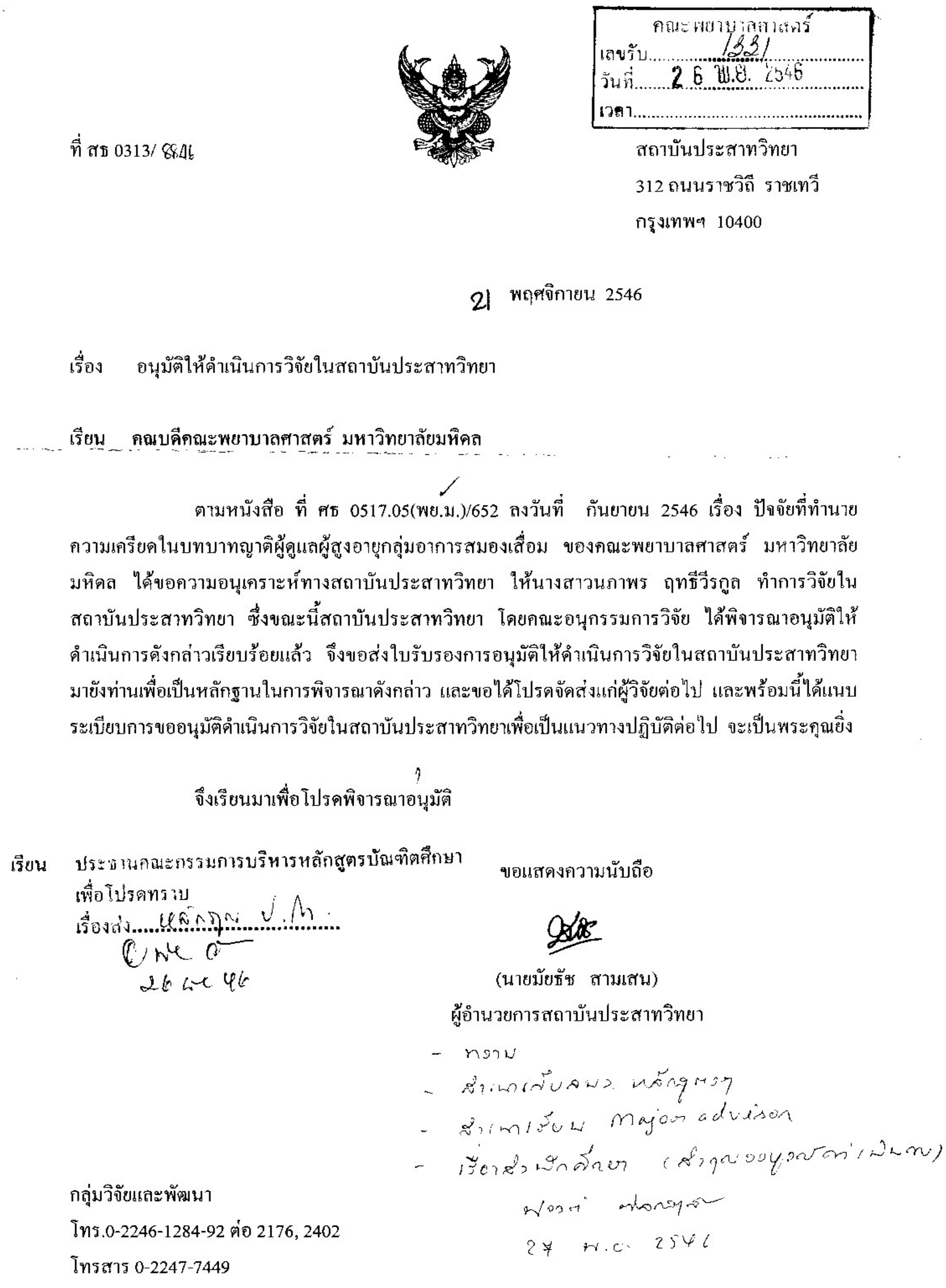
โรงพยาบาลจุฬาลงกรณ์พิจารณาแล้ว ไม่ขัดข้อง ยินดีให้ดำเนินการตามที่ขอมา กรุณาติดต่อหัวหน้าพยาบาล ตึกจักรพงษ์ชั้น 2 และ ศ.นพ.กัมมันต์ พันธุมจินดา ฝ่ายอายุรศาสตร์ โดยโทรศัพท์นัดหมายล่วงหน้าก่อนเก็บข้อมูลและก่อนพบบุคคลดังกล่าว ขอให้นักศึกษานำบัตรนักศึกษาหรือบัตรประจำตัวประชาชนพร้อมจดหมายฉบับนี้มาติดต่อรับบัตรประจำตัวผู้เก็บข้อมูล ณ ตึกอำนวยการชั้นล่าง ห้องหมายเลข 2 *อนึ่ง เมื่อนิสิตดำเนินการตามโครงการเสร็จสิ้น ขอความกรุณาทางมหาวิทยาลัยมหิดล ส่งมอบเอกสารวิทยานิพนธ์ในรูปเอกสาร 1 ชุดและในรูปแผ่น diskette 1 ชุดให้เป็นกรรมสิทธิ์ของโรงพยาบาลเพื่อนำข้อมูลมาใช้ประโยชน์ในการพัฒนาคุณภาพการบริการและการรักษาพยาบาล จะขอบคุณยิ่ง*

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(ศ.นพ. เกรียง ตั้งสง่า)
รองผู้อำนวยการฯฝ่ายยุทธศาสตร์และการจัดการสารสนเทศ
ปฏิบัติการแทน ผู้อำนวยการโรงพยาบาลจุฬาลงกรณ์

ฝ่ายการพยาบาล โทรศัพท์ 0-2256-4360 ฝ่ายอายุรศาสตร์ โทรศัพท์ 0-2256-4246
ฝ่ายเลขานุการ โทรศัพท์ 0-2256-4347 โทรสาร 0-2256-4368



คณะพยาบาลศาสตร์
เลขรับ 1331
วันที่ 26 พ.ย. 2546
เวลา

ที่ สธ 0313/ ๘๔๖

สถาบันประสาทวิทยา
312 ถนนราชวิถี ราชเทวี
กรุงเทพฯ 10400

21 พฤศจิกายน 2546

เรื่อง อนุมัติให้ดำเนินการวิจัยในสถาบันประสาทวิทยา

เรียน คณบดีคณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล

ตามหนังสือ ที่ ศธ 0517.05(พย.ม.)/652 ลงวันที่ กันยายน 2546 เรื่อง ปัจจัยที่ทำนายความเครียดในบทบาทญาติผู้ดูแลผู้สูงอายุกลุ่มอาการสมองเสื่อม ของคณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล ได้ขอความอนุเคราะห์ทางสถาบันประสาทวิทยา ให้นางสาวนภาพร ฤทธิวีรกูล ทำการวิจัยในสถาบันประสาทวิทยา ซึ่งขณะนี้สถาบันประสาทวิทยา โดยคณะอนุกรรมการวิจัย ได้พิจารณาอนุมัติให้ดำเนินการดังกล่าวเรียบร้อยแล้ว จึงขอส่งใบรับรองการอนุมัติให้ดำเนินการวิจัยในสถาบันประสาทวิทยามายังท่านเพื่อเป็นหลักฐานในการพิจารณาดังกล่าว และขอได้โปรดจัดส่งแก่ผู้วิจัยต่อไป และพร้อมนี้ได้แนบระเบียบการขออนุมัติดำเนินการวิจัยในสถาบันประสาทวิทยาเพื่อเป็นแนวทางปฏิบัติต่อไป จะเป็นพระคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณาอนุมัติ

ขอแสดงความนับถือ

(นายมัยธัช สามเสน)
ผู้อำนวยการสถาบันประสาทวิทยา

เรียน ประธานคณะกรรมการบริหารหลักสูตรบัณฑิตศึกษา
เพื่อโปรดทราบ
เรื่องส่ง หลักสูตร ป.โท
26 พ.ย. 46

- ทราบ
- สำเนาเรียน [illegible] หลักสูตร
- สำเนาเรียน Major advisor
- เรื่องส่งนักศึกษา (สำเนา[illegible])

27 พ.ย. 2546

กลุ่มวิจัยและพัฒนา
โทร.0-2246-1284-92 ต่อ 2176, 2402
โทรสาร 0-2247-7449

APPENDIX D

More Results

สรุปผลการวิจัย

1. ปริมาณกิจกรรมการดูแล เรียงลำดับตามความมากน้อยของจำนวนในรายด้าน

1.1 ด้านการดูแลส่วนบุคคล

ข้อ	ข้อความ	จำนวน	ร้อยละ
32	ให้เวลาอยู่กับผู้ป่วย	88	97.8
16	ดูแลให้ได้รับปริมาณและสารอาหารที่เหมาะสม	84	93.3
4	ดูแลในการรับประทานยาหรือฉีดยา	82	91.1
21	ทำอาหารหรือจัดเตรียมอาหารให้ผู้ป่วย	81	90.0
45	เปลี่ยนผ้าปูที่นอนให้กับผู้ป่วย	78	86.7
49	ดูแลให้พักผ่อนเพียงพอ	76	84.4
58	สังเกตอาการบวมของผู้ป่วย	69	76.7
11	ดูแลให้ได้รับน้ำอย่างเพียงพอ	68	75.6
77	กระตุ้นให้เริ่มมีกิจวัตรประจำวัน	64	71.1
66	ดูแลตัดเล็บมือ เล็บเท้าให้	64	71.1
17	ทำความสะอาดเมื่อผู้ป่วยปัสสาวะราด หรือถ่ายเลอะเทอะ	64	71.1
41	ช่วยแก้ปัญหาเมื่อผู้ป่วยท้องผูกหรือท้องเสีย	63	70.0
22	ตรวจตราผิวหนังหรือทาโลชั่นให้ผู้ป่วย	62	68.9
5	ช่วยในการรับประทานอาหาร	62	68.9
30	ช่วยสวมใส่หรือถอดเสื้อผ้า	61	67.8
12	ช่วยอาบน้ำหรือเช็ดตัว	61	67.8
37	ดูแลหรือรักษาผิวหนังที่เกิดปัญหา	60	66.7
44	พาผู้ป่วยเข้าห้องน้ำ	55	61.1
33	ตื่นในยามค่ำคืนเพื่อดูแลผู้ป่วย	55	61.1
52	อยู่กับผู้ป่วยขณะรับประทานอาหารเพื่อให้แน่ใจว่าไม่มีอาการสำลัก	53	58.9
59	ช่วยสระผมให้ผู้ป่วย	53	58.9
47	ช่วยในการใช้ห้องน้ำหรือหม้อนอน	53	58.9
74	ดูแลให้อยู่ในท่าที่เหมาะสม	48	53.3
25	ช่วยในการแปรงฟันหรือทำความสะอาดฟันปลอม	35	38.9
26	ดูแลเครื่องมือเครื่องใช้ในการรักษา	13	14.4

1.2 ด้านการดูแลเกี่ยวกับการเคลื่อนไหวและการป้องกันอันตราย

ข้อ	**ข้อความ**	**จำนวน**	**ร้อยละ**
6	เฝ้าระวังไม่ให้ผู้ป่วยหกล้มหรือเกิดอุบัติเหตุ	81	90.0
3	เฝ้าระวังเพื่อให้แน่ใจว่าผู้ป่วยปลอดภัย	80	88.9
69	ดูแลสิ่งแวดล้อมเพื่อให้แน่ใจว่าผู้ป่วยปลอดภัย	80	88.9
38	คอยตรวจตราเพื่อให้แน่ใจว่าผู้ป่วยยังอยู่ดี	79	87.8
70	คอยสังเกตอาการเตือนที่แสดงถึงโรคกำเริบ	78	86.7
24	ปกป้องผู้ป่วยจากสารพิษต่างๆ	42	46.7
40	ช่วยพยุงเดินขึ้นหรือลงบันได	41	45.6
68	ช่วยเหลือเนื่องจากผู้ป่วยมีปัญหาด้านสายตา	39	43.3
64	ตรวจตราจำนวนคนที่เข้าเยี่ยม	11	12.2

1.3 ด้านการดูแลเกี่ยวกับอาการเจ็บป่วย

ข้อ	**ข้อความ**	**จำนวน**	**ร้อยละ**
8	คอยรายงานอาการผู้ป่วยให้แพทย์ พยาบาลทราบ	83	92.2
31	คอยให้ข้อมูลเกี่ยวกับอาการผู้ป่วยกับคนในครอบครัว	79	87.8
7	ช่วยในการคิดหรือตัดสินใจเกี่ยวกับการรักษา	74	82.2
46	เฝ้าระวังหรือรักษาการติดเชื้อของผู้ป่วย	66	73.3
55	ช่วยผู้ป่วยเนื่องจากปัญหาความเจ็บปวด	62	68.9
28	ช่วยแก้ไขเมื่อมีอาการอ่อนเพลีย	55	61.1
51	ช่วยเมื่อมีปัญหาเกี่ยวกับการหายใจ	33	36.7
42	ช่วยแก้ปัญหาเมื่อมีอาการคลื่นไส้	32	35.6

1.4 ด้านการดูแลเกี่ยวกับการเคลื่อนย้าย การเงิน และงานบ้าน

ข้อ	**ข้อความ**	**จำนวน**	**ร้อยละ**
57	ช่วยในการทำงานบ้าน	64	71.1
9	อุ้มหรือพยุงผู้ป่วย	57	63.3
65	ต้องแก้ปัญหาฉุกเฉินเมื่อผู้ป่วยมีอาการเปลี่ยนแปลงทันที	43	47.8
53	ช่วยในการตัดสินใจเกี่ยวกับการเงิน	41	45.6
13	ช่วยขับรถให้เวลาที่ออกนอกบ้าน	26	28.9

1.5 ด้านการดูแลด้านอารมณ์และกิจกรรมเล็กๆน้อยๆ

ข้อ	ข้อความ	จำนวน	ร้อยละ
10	ไปเป็นเพื่อนเวลาที่ผู้ป่วยออกนอกบ้าน	78	86.7
54	ช่วยในงานที่ละเอียด	71	78.9
15	ร่วมกิจกรรมการใช้เวลาว่างกับผู้ป่วย	67	74.4
50	ช่วยดูแลในสิ่งเล็กๆน้อยๆ	63	70.0
60	ช่วยในการใช้โทรศัพท์	49	54.4
20	พูดคุยกับผู้ป่วยเกี่ยวกับอนาคต เป้าหมาย และการดำรงชีวิต	39	43.3
76	ช่วยในการปฏิบัติกิจกรรมทางศาสนา	32	35.6
43	ช่วยซ่อมวัสดุ อุปกรณ์ภายในบ้าน	26	28.9
63	อ่านหนังสือให้ฟัง	23	25.6
18	เขียนหนังสือให้	16	17.8
27	เป็นธุระให้ในเรื่องเกี่ยวกับกฎหมายหรือคดีความ	15	16.7

1.6 ด้านการดูแลเกี่ยวกับปัญหาความจำเสื่อมและการเปลี่ยนแปลงพฤติกรรม

ข้อ	ข้อความ	จำนวน	ร้อยละ
1	ไปซื้อของหรือทำธุระให้	82	91.1
71	ให้เวลาในการพูด หรือแสดงว่าต้องการอะไร	79	87.8
73	ช่วยให้ผู้อื่นเข้าใจสิ่งที่ผู้ป่วยพูดหรือแสดงออก	65	72.2
72	เรียนรู้วิธีการสื่อสารกับผู้ป่วย	64	71.1
23	รับฟังและตอบคำถามผู้ป่วยซ้ำแล้วซ้ำ	61	67.8
34	ช่วยเหลือเวลาที่ผู้ป่วยมีสภาพอารมณ์ขึ้นๆลงๆ	57	63.3
61	แก้ปัญหาเวลาที่ผู้ป่วยซุกซ่อน หรือลืมของที่เก็บไว้	56	62.2
36	จัดการกับสถานการณ์ที่ผู้ป่วยไม่สามารถจดจำอะไรได้	52	57.8
29	ดูแลเวลาไปไหนมาไหน เองจากผู้ป่วยมีความจำเลอะเลือน	48	53.3
14	จัดการกับอาการหวาดระแวงหรือ ช่างสงสัย	44	48.9
75	จัดการกับอาการที่ผู้ป่วยอยู่ไม่สุข หรือวุ่นวาย	37	41.1
35	ช่วยในการฝากหรือถอนเงินจากธนาคาร	35	38.9
19	แก้ปัญหาเวลาที่ผู้ป่วยกรีดร้องเสียงดัง หรือเอะอะโวยวาย	34	37.8
67	จัดการกับการที่ผู้ป่วยพูดสบถสาบาน หรือหยาบคาย	30	33.3
48	แก้ปัญหาเวลาที่ผู้ป่วยล็อคประตูห้อง หรือลืมกุญแจ	28	31.1
39	จัดการกับการที่ผู้ป่วยมีอาการประสาทหลอน	24	26.7
56	แก้ปัญหาเนื่องจากผู้ป่วยทุบตี หรือผลักไสผู้อื่น	17	18.9
62	จัดการกับการที่ผู้ป่วยแสดงพฤติกรรมทางเพศที่ไม่เหมาะสม	12	13.3

2. **ความเครียดจากการดูแล** เรียงลำดับค่าเฉลี่ยจากมากไปน้อยในแต่ละด้าน (ระดับคะแนน 1-5)

2.1 ด้านการดูแลส่วนบุคคล

ข้อ	**ข้อความ**	**ค่าเฉลี่ย**
25	ช่วยในการแปรงฟันหรือทำความสะอาดฟันปลอม	2.20
17	ทำความสะอาดเมื่อผู้ป่วยปัสสาวะราด หรือถ่ายเลอะเทอะ	2.17
77	กระตุ้นให้เริ่มมีกิจวัตรประจำวัน	2.11
41	ช่วยแก้ปัญหาเมื่อผู้ป่วยท้องผูกหรือท้องเสีย	2.06
44	พาผู้ป่วยเข้าห้องน้ำ	2.02
33	ตื่นในยามค่ำคืนเพื่อดูแลผู้ป่วย	2.00
74	ดูแลให้อยู่ในท่าที่เหมาะสม	1.98
12	ช่วยอาบน้ำหรือเช็ดตัว	1.93
16	ดูแลให้ได้รับปริมาณและสารอาหารที่เหมาะสม	1.88
32	ให้เวลาอยู่กับผู้ป่วย	1.87
11	ดูแลให้ได้รับน้ำอย่างเพียงพอ	1.87
5	ช่วยในการรับประทานอาหาร	1.82
52	อยู่กับผู้ป่วยขณะรับประทานอาหารเพื่อให้แน่ใจว่าไม่มีอาการสำลัก	1.82
37	ดูแลหรือรักษาผิวหนังที่เกิดปัญหา	1.80
30	ช่วยสวมใส่หรือถอดเสื้อผ้า	1.79
47	ช่วยในการใช้ห้องน้ำหรือหม้อนอน	1.75
49	ดูแลให้พักผ่อนเพียงพอ	1.74
4	ดูแลในการรับประทานยาหรือฉีดยา	1.71
26	ดูแลเครื่องมือเครื่องใช้ในการรักษา	1.62
59	ช่วยสระผมให้ผู้ป่วย	1.60
58	สังเกตอาการบวมของผู้ป่วย	1.59
45	เปลี่ยนผ้าปูที่นอนให้กับผู้ป่วย	1.40
21	ทำอาหารหรือจัดเตรียมอาหารให้ผู้ป่วย	1.38
22	ตรวจตราผิวหนังหรือทาโลชั่นให้ผู้ป่วย	1.35
66	ดูแลตัดเล็บมือ เล็บเท้าให้	1.31

2.2 ด้านการดูแลเกี่ยวกับการเคลื่อนไหวและการป้องกันอันตราย

ข้อ	ข้อความ	ค่าเฉลี่ย
6	เฝ้าระวังไม่ให้ผู้ป่วยหกล้มหรือเกิดอุบัติเหตุ	2.49
3	เฝ้าระวังเพื่อให้แน่ใจว่าผู้ป่วยปลอดภัย	2.41
2	ช่วยเหลือในการเดินในบ้านหรือนอกบ้าน	2.33
70	คอยสังเกตอาการเตือนที่แสดงถึงโรคกำเริบ	2.01
24	ช่วยพยุงเดินขึ้นหรือลงบันได	1.95
69	ดูแลสิ่งแวดล้อมเพื่อให้แน่ใจว่าผู้ป่วยปลอดภัย	1..75
38	ตรวจตราเพื่อให้แน่ใจว่าผู้ป่วยยังอยู่ดี	1.52
40	ปกป้องผู้ป่วยจากสารพิษต่างๆ	1.51
64	ตรวจตราจำนวนคนที่เข้าเยี่ยม	1.45
68	ช่วยเหลือเนื่องจากผู้ป่วยมีปัญหาด้านสายตา	1.44

2.3 ด้านการดูแลเกี่ยวกับอาการเจ็บป่วย

ข้อ	ข้อความ	ค่าเฉลี่ย
51	ช่วยเมื่อมีปัญหาเกี่ยวกับการหายใจ	2.55
42	ช่วยแก้ปัญหาเมื่อมีอาการคลื่นไส้	2.03
46	เฝ้าระวังหรือรักษาการติดเชื้อของผู้ป่วย	1.92
28	ช่วยแก้ไขเมื่อมีอาการอ่อนเพลีย	1.85
55	ช่วยผู้ป่วยเนื่องจากปัญหาความเจ็บปวด	1.81
7	ช่วยในการคิดหรือตัดสินใจเกี่ยวกับการรักษา	1.78
8	คอยรายงานอาการผู้ป่วยให้แพทย์ พยาบาลทราบ	1.47
31	คอยให้ข้อมูลเกี่ยวกับอาการผู้ป่วยกับคนในครอบครัว	1.37

2.4 ด้านการดูแลเกี่ยวกับการเคลื่อนย้าย การเงิน และงานบ้าน

ข้อ	ข้อความ	ค่าเฉลี่ย
65	ต้องแก้ปัญหาฉุกเฉินเมื่อผู้ป่วยมีอาการเปลี่ยนแปลงทันที	2.33
9	อุ้มหรือพยุงผู้ป่วย	2.30
13	ช่วยขับรถให้เวลาที่ออกนอกบ้าน	1.77
53	ช่วยในการตัดสินใจเกี่ยวกับการเงิน	1.46
57	ช่วยในการทำงานบ้าน	1.44

2.5 ด้านการดูแลด้านอารมณ์และกิจกรรมเล็กๆน้อยๆ

ข้อ	**ข้อความ**	**ค่าเฉลี่ย**
10	ไปเป็นเพื่อนเวลาที่ผู้ป่วยออกนอกบ้าน	2.00
43	ช่วยซ่อมวัสดุ อุปกรณ์ภายในบ้าน	1.96
20	พูดคุยกับผู้ป่วยเกี่ยวกับอนาคต เป้าหมาย และการดำรงชีวิต	1.90
63	อ่านหนังสือให้ฟัง	1.60
76	ช่วยในการปฏิบัติกิจกรรมทางศาสนา	1.53
18	เขียนหนังสือให้	1.44
50	ช่วยดูแลในสิ่งเล็กๆน้อยๆ	1.41
15	ร่วมกิจกรรมการใช้เวลาว่างกับผู้ป่วย	1.39
60	ช่วยในการใช้โทรศัพท์	1.39
54	ช่วยในงานที่ละเอียด	1.34
27	เป็นธุระให้ในเรื่องเกี่ยวกับกฎหมายหรือคดีความ	1.33

2.6 ด้านการดูแลเกี่ยวกับปัญหาความจำเสื่อมและการเปลี่ยนแปลงพฤติกรรม

ข้อ	**ข้อความ**	**ค่าเฉลี่ย**
62	จัดการกับการที่ผู้ป่วยแสดงพฤติกรรมทางเพศที่ไม่เหมาะสม	3.33
19	แก้ปัญหาเวลาที่ผู้ป่วยกรีดร้องเสียงดัง หรือเอะอะโวยวาย	2.88
61	แก้ปัญหาเวลาที่ผู้ป่วยซุกซ่อน หรือลืมของที่เก็บไว้	2.68
34	ช่วยเหลือเวลาที่ผู้ป่วยมีสภาพอารมณ์ขึ้นๆลงๆ	2.65
75	จัดการกับการที่ผู้ป่วยกระสับกระส่ายหรือไม่อยู่นิ่ง	2.54
39	จัดการกับการที่ผู้ป่วยมีอาการประสาทหลอน	2.46
67	จัดการกับการที่ผู้ป่วยพูดสบถสาบาน หรือหยาบคาย	2.43
23	รับฟังและตอบคำถามผู้ป่วยซ้ำแล้วซ้ำ	2.43
29	ดูแลเวลาไปไหนมาไหน เองจากผู้ป่วยมีความจำเลอะเลือน	2.42
56	แก้ปัญหาเนื่องจากผู้ป่วยทุบตี หรือผลักไสผู้อื่น	2.41
14	จัดการกับอาการหวาดระแวงหรือ ช่างสงสัย	2.34
36	จัดการกับสถานการณ์ที่ผู้ป่วยไม่สามารถจดจำอะไรได้	2.23
72	เรียนรู้วิธีการสื่อสารกับผู้ป่วย	2.09
48	แก้ปัญหาเวลาที่ผู้ป่วยล๊อคประตูห้อง หรือลืมกุญแจ	2.04
71	ให้เวลาในการพูด หรือแสดงว่าต้องการอะไร	1.89
73	ช่วยให้ผู้อื่นเข้าใจในสิ่งที่ผู้ป่วยแสดงออกหรือพูดในสิ่งที่ต้องการ	1.77
1	ไปซื้อของหรือทำธุระให้	1.49
35	ช่วยในการฝากหรือถอนเงินจากธนาคาร	1.33

3. ปัญหาการสื่อสาร (ระดับคะแนน 0-4)

ข้อ	ข้อความ	ค่าเฉลี่ย
3	ปัญหาด้านความจำ / ความเข้าใจ	1.84
2	ปัญหาการพูด	1.63
1	ปัญหาการได้ยิน	0.81

4. รางวัลจากการดูแล (ระดับคะแนน 0-4)

4.1 ด้านการให้ความหมาย

ข้อ	ข้อความ	ค่าเฉลี่ย
4	ทำในสิ่งที่มีความสำคัญ	2.93
22	ใกล้ชิดสนิทสนมมากขึ้น	2.37
26	รักหรือรู้สึกดีกับผู้ป่วยมากขึ้น	2.37
12	ชีวิตมีความหมายมากขึ้น	2.26
14	คนในครอบครัวใกล้ชิดสนิทสนมมากขึ้น	2.22
19	เป็นประสบการณ์ที่พึงพอใจ	2.20
10	รู้สึกดีต่อตนเอง	2.11
20	มีความสุข	2.08
15	รู้สึกประสบความสำเร็จในบทบาท	2.07
28	ชื่นชมหรือภาคภูมิใจคนในครอบครัว	2.04
11	ผู้อื่นเห็นความสำคัญ	2.03
25	ผู้อื่นชื่นชมหรือซาบซึ้ง ถือเป็นรางวัล	1.97

4.2 ด้านจิตวิญญาณ

ข้อ	ข้อความ	ค่าเฉลี่ย
6	แสดงความกตัญญู	2.94
1	ตอบแทนบุญคุณ	2.82
8	ร่วมทุกข์ร่วมสุข	2.71
3	สร้างกุศลผลบุญ	2.48
5	ปลื้มปิติ	2.37
1	ทำความดี	2.37
7	มีชีวิตที่ดีในชาตินี้ / ชาติหน้า	2.26

4.3 ด้านการเรียนรู้

ข้อ	ข้อความ	ค่าเฉลี่ย
23	เรียนรู้การดูแลสุขภาพ	2.46
24	ปรับตัวไปในทางที่ดีขึ้น	2.42
2	เข้าใจตนเองเมื่อเจ็บป่วย	2.29
27	ดูแลสุขภาพตนเองดีขึ้น	1.69

4.4 ด้านการได้อยู่เพื่อผู้ป่วย

ข้อ	ข้อความ	ค่าเฉลี่ย
17	ช่วยชีวิตผู้ป่วยให้ดีขึ้น	2.72
21	มีคุณประโยชน์ต่อผู้ป่วย	2.64
18	ภูมิใจที่ได้ดูแล	2.41

4.5 ด้านเศรษฐกิจ

ข้อ	ข้อความ	ค่าเฉลี่ย
13	ประหยัดเงินมากกว่าการให้ผู้ป่วยไปอยู่สถานพยาบาล	2.09
9	ช่วยฐานะทางการเงินโดยไม่คาดคิดมาก่อน	0.41

5. ภาวะสุขภาพของญาติผู้ดูแล

5.1 ภาวะสุขภาพกาย

ข้อ	ข้อความ	ค่าเฉลี่ย
12	อาบน้ำหรือแต่งตัว	96.67
7	เดินขึ้นบันได 1 ชั้น	92.22
11	เดินร้อยเมตร	90.56
4	กิจกรรมที่ออกแรงปานกลาง	90.00
5	หิ้วของจากการจ่ายตลาด	83.33
22	การเจ็บปวดกระทบต่อการทำงานตามปกติ	82.22
6	เดินขึ้นบันไดมากกว่า 1 ชั้น	77.78
8	งอตัว คุกเข่า หรือก้มตัว	76.67
16	มีความยากลำบากในการทำงานจากปัญหาสุขภาพด้านร่างกาย	76.39
33	เจ็บป่วยง่ายกว่าคนทั่วไป	76.11
10	เดินหลายร้อยเมตร	76.11
15	ทำงานบางอย่างไม่ได้จากปัญหาสุขภาพด้านร่างกาย	75.28
14	ทำงานได้น้อยกว่าที่อยากทำจากปัญหาสุขภาพด้านร่างกาย	71..67

ข้อ	ข้อความ	ค่าเฉลี่ย
9	เดินมากกว่าหนึ่งกิโลเมตรครึ่ง	71.11
13	ลดปริมาณเวลาในการทำงานลงจากปัญหาสุขภาพด้านร่างกาย	70.28
21	การเจ็บปวดของร่างกายในระหว่าง 1 เดือนที่ผ่านมา	69.17
35	ฉันคิดว่าสุขภาพของฉันแย่ลง	63.89
34	สุขภาพของฉันดีเหมือนคนอื่นที่ฉันรู้จัก	61.11
36	ฉันรู้สึกว่าสุขภาพของฉันดีเยี่ยม	47.22
3	กิจกรรมที่ออกแรงมาก	46.67
1	โดยทั่วไปสุขภาพของท่านเป็นอย่างไร	42.50

3.2 ภาวะสุขภาพจิต

ข้อ	ข้อความ	ค่าเฉลี่ย
20	ปัญหาจิตใจ ร่างกายเป็นอุปสรรคต่อการทำกิจกรรมกับครอบครัวหรือเพื่อน	83.33
32	ปัญหาจิตใจ ร่างกายเป็นอุปสรรคต่อการทำกิจกรรมทางสังคม	81.39
19	ทำงานระมัดระวังน้อยลงจากปัญหาด้านจิตใจ	76.39
28	รู้สึกท้อแท้ ซึมเศร้า	74.17
29	รู้สึกหมดแรง	73.89
18	ทำงานสำเร็จได้น้อยลงกว่าอยากทำจากปัญหาด้านอารมณ์	73.06
17	ลดปริมาณการทำงานจากปัญหาด้านจิตใจอารมณ์	71.11
25	รู้สึกหดหู่ใจและไม่มีสิ่งใดทำให้จิตใจดีขึ้น	70.28
31	รู้สึกอ่อนเพลีย	63.33
30	รู้สึกมีความสุข	59.44
24	รู้สึกเป็นกังวลอย่างมาก	58.06
26	รู้สึกสงบและเป็นสุข	53.33
23	มีชีวิตชีวา	49.17
27	มีพละกำลังอย่างมาก	44.72

ข้อ 2. สุขภาพของท่านเป็นอย่างไรเมื่อเปรียบกับปีที่แล้ว

สุขภาพแย่กว่า 3 เดือนที่แล้วมาก ร้อยละ 2.2
สุขภาพค่อนข้างแย่กว่า 3 เดือนที่แล้ว ร้อยละ 24.4
สุขภาพเหมือน 3 เดือนที่แล้ว ร้อยละ 54.4
สุขภาพค่อนข้างดีกว่า 3 เดือนที่แล้ว ร้อยละ 17.9
สุขภาพดีกว่า 3 เดือนที่แล้ว ร้อยละ 1.1

APPENDIX E

Testing Assumptions of Multiple Regression Analysis

The assumptions were tested before using Multiple regression Analysis included linearity, normality, homoscedasticity, multicollinearity. The results for each assumptions were presented as follow:

1. The relationship between X and Y must be linear and normal.

The residuals were tested for approximately normal distribution of the residual was normal, it meant the relationship is linear and the dependent variables are normally distributed for each value of independent (Nouris, 1996 cited in Munro, 1992: 270). It has been shown that a histogram of the standardized residuals was approximately normal and was presented as follow:

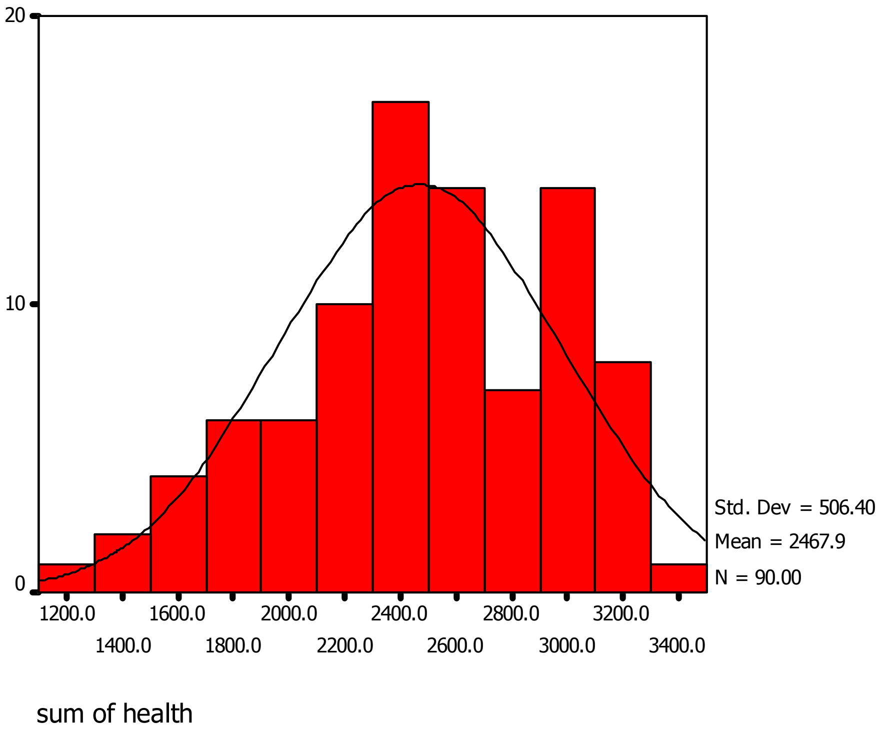


Figure 3 Histogram of Residuals

2. Homoscedasticity means every value of independent variable (Xi), the distribution of dependent variable (Y scores) must have approximately equal variability. To check this assumption, the residual was plotted against the predicted values and against the independent variables. The data from straight line from lower left corner to upper right corner was approximately straight. It has been shown that the residuals were within the range of plus or minus three standard deviations.

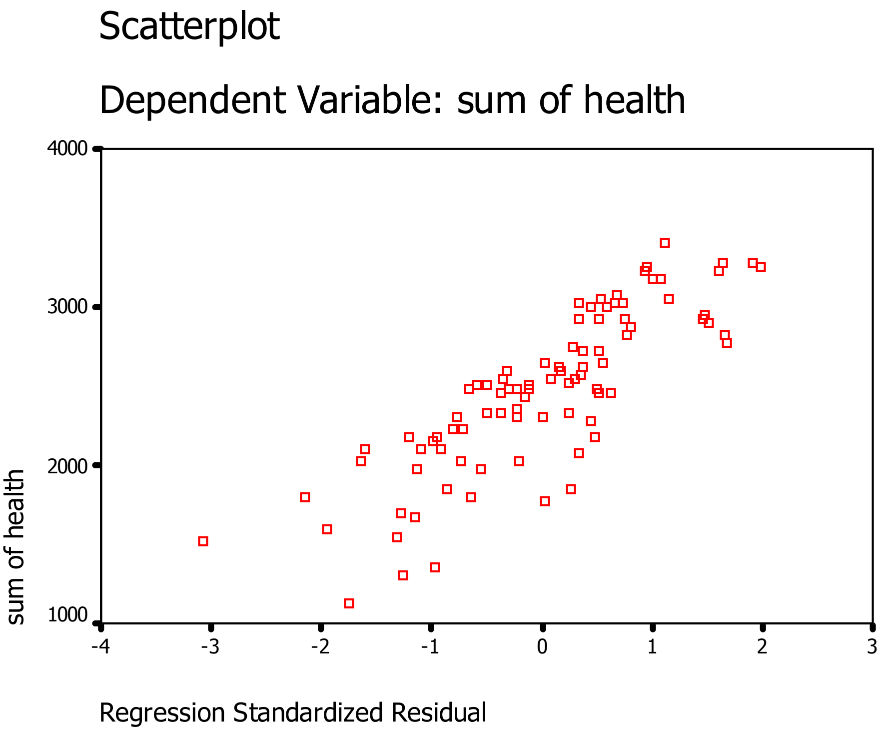


Figure 4 Scatter plot between regression residual and regression predicted value

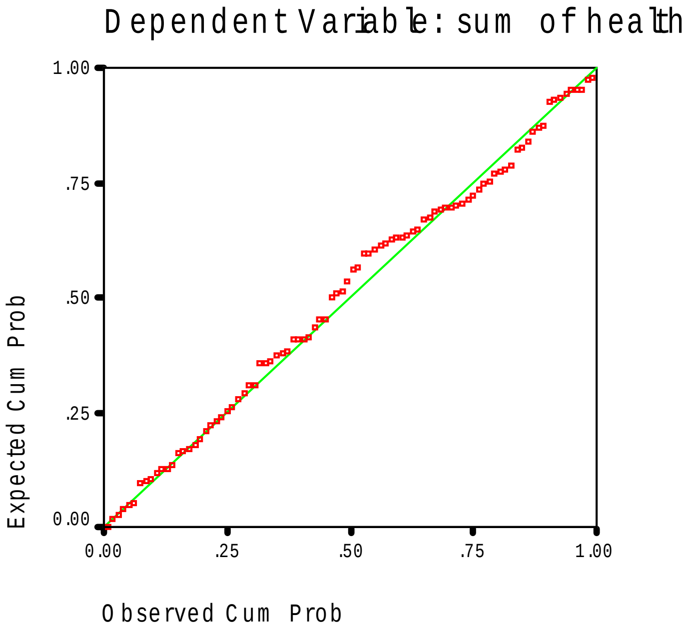


Figure 5 Normal P-P plot of regression standardized residual

3. Multicollinearity means the interrelatedness of the dependent variables. The tolerance of a variable is used as a measure of collinearity. It is the proportion of variance in a variable that is not accounted for by the order independent variables (Nouris, 1996 cited in Munro, 1992: 268). The tolerance equals 1-*R* squared. A tolerance of 0 indicates perfect collinearity. To check this assumption, the tolerance of variables would be shown if the model contained more than two independent variables. In the analysis, it was found that strain from direct care and communication problems (independent variables) were in the model to predict health status. The tolerance of strain from direct care was .78 and communication problems was .73

In summary, the assumption of multicollinearity for using Multiple Regression Analysis has been met with the requirement.

BIOGRAPHY

NAME	Miss. Napaphon Ritteeveerakul
DATE OF BIRTH	13 February 1965
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTIONS ATTENDED	Thai Red Cross College of Nursing, 1988 Bachelor of Nursing Mahidol University, 2005 : Master of Nursing Science (Adult Nursing)
POSITION & OFFICE	King Chulalongkorn Memorial Hospital, Bangkok, Thailand Position : Nurse at Ambulatory Care Unit Tel. 02 – 2565416, 02 – 2565489 E-mail: rnapaphon@hotmail.com
HOME ADDRESS	577/4 Paitoonniwet village, Soi Pongpetchniwet Prachacheon Road Bangkok, Thailand Tel. 02 - 5875643