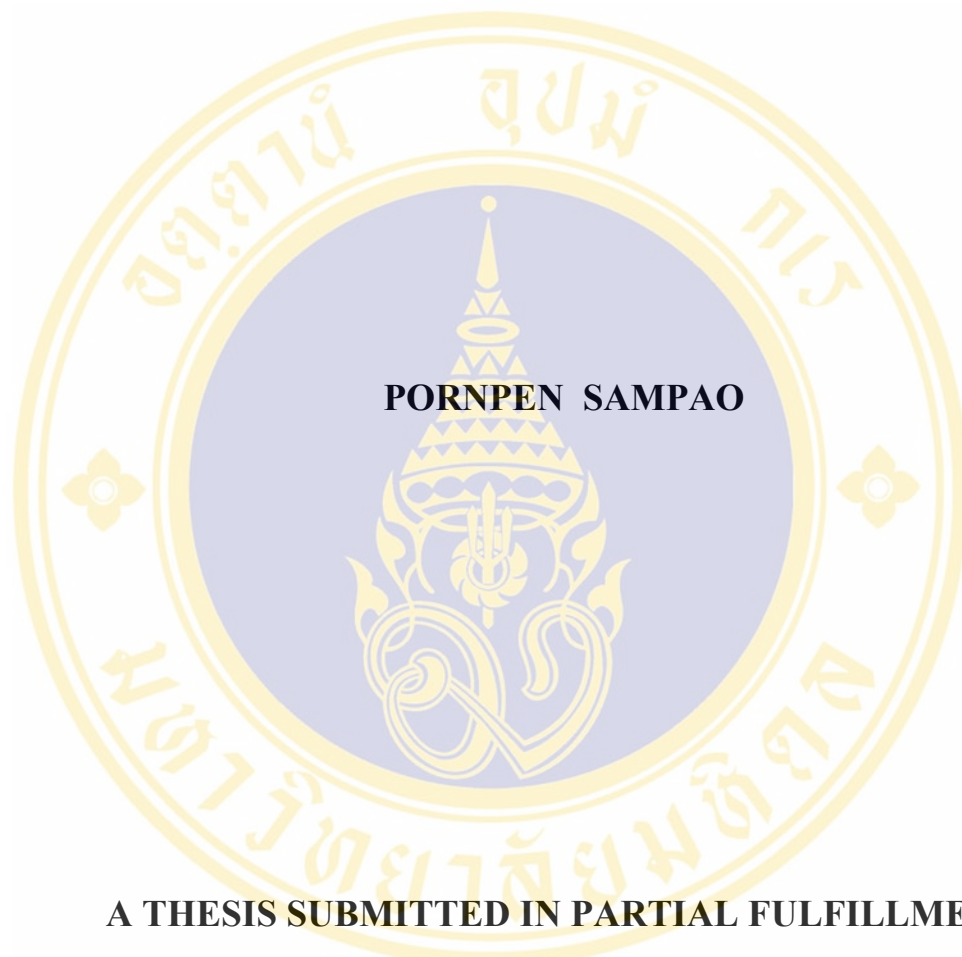


**RELATIONSHIPS OF HEALTH STATUS, FAMILY RELATIONS,
AND LONELINESS TO DEPRESSION IN OLDER ADULTS**



**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF NURSING SCIENCE
(PSYCHIATRIC AND MENTAL HEALTH NURSING)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY**

2005

ISBN 974-04-5862-9

COPYRIGHT OF MAHIDOL UNIVERSITY

Thesis
Entitled

**RELATIONSHIPS OF HEALTH STATUS, FAMILY RELATIONS,
AND LONELINESS TO DEPRESSION IN OLDER ADULTS**

Pornpen Sampao

Miss.Pornpen Sampao
Candidate

Sopin Sangon

Lecturer Dr.Sopin Sangon,
Ph.D.
Major-Advisor

Porntip Malathum

Lecturer Dr.Porntip Malathum,
Ph.D.
Co-Advisor

Rassmidara Hoonsawat

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

Orasa Panpakdee

Assoc. Prof.Orasa Panpakdee
D.N.S.
Chairman
Master of Nursing Science
Faculty of Medicine
Ramathibodi Hospital

Thesis
Entitled

**RELATIONSHIPS OF HEALTH STATUS, FAMILY RELATIONS,
AND LONELINESS TO DEPRESSION IN OLDER ADULTS**

was submitted to the Faculty of Graduate Studies, Mahidol University
For the degree of Master of Nursing Science (Psychiatric and Mental Health Nursing)
on
30 March, 2005

Pornpen Sampao
.....
Miss.Pornpen Sampao
Candidate

Sopin Sangon
.....
Lecturer Dr.Sopin Sangon,
Ph.D.
Chair

Porntip Malathum
.....
Lecturer Dr.Porntip Malathum,
Ph.D.
Member

Vajira Kasikosol
.....
Assoc.Prof.Vajira Kasikosol
M.A.
Member

Kwanjai Amnatsatsue
.....
Lecturer Dr. Kwanjai Amnatsatsue
Ph.D.
Member

Rassmidara Hoonsawat
.....
Assoc.Prof.Rassmidara Hoonsawat
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol Univesity

Rajata Rajatanavin
.....
Prof.Rajata Rajatanavin
M.D., F.A.C.E.
Dean
Faculty of Medicine
Ramathibodi Hospital,
Mahidol Univesity.

ACKNOWLEDGEMENT

The study could not have been successfully completed without the assistance of many people. I would like to express my sincere appreciation to my major advisor, Lecturer Doctor Sopin Sangon, for her kindness, understanding, valuable advice, and assistance throughout my study which led me to the successful completion of this thesis.

My gratitude goes to my co-advisor, Lecturer Doctor Porn-tip Maratum for her kindness, encouragement, and valuable advice. My appreciation and gratitude are also extended to Assistant Professor Vajira Kasikosol, and Lecturer Doctor Kwanjai Amnatsatsue for their valuable comments needed to improve this thesis.

I would like to thank administration of Manorom Hospital for opportunity to further my studies as well as the head nurse and staff nurse, Manorom Hospital for their encouragement throughout this study. My special thanks express to the older adults for their willingness cooperation to make this study possible.

Propound thanks to my friends in the Master's Degree Program number 25 at Ramathibodi School of Nursing for their kind support, encouragement, and assistance throughout this study.

Finally, my special thanks go to my family, particular my beloved mother for her greatest love and support strength, my relatives, my friends and Mr. Apirat Chaiwattaruk for their love, support, encouragement and assistance.

Pornpen Sampao

RELATIONSHIPS OF HEALTH STATUS, FAMILY RELATIONS, AND LONELINESS
TO DEPRESSION IN OLDER ADULTS.

PORNPEN SAMPAO 4536578 RAPM/M

M.N.S. (PSYCHIATRIC AND MENTAL HEALTH NURSING)

THESIS ADVISORS: SOPIN SANGON, Ph.D. (NURSING), PORNTIP MALATHUM,
Ph.D. (NURSING)

ABSTRACT

The aim of this descriptive correlational research was to investigate the relationship of health status, family relations, and loneliness to depression in older adults. The psychosocial theory for depression in older adults was used to guide this study. The research sample consisted of 96 persons who lived in Chainat Province. The sample was selected by multi-stage random sampling. The seven instruments used in the study were the Set Test, Demographic Data Form, the Modified Barthel ADL Index, the Chula ADL Index, the Family Relationship Inventory, the Loneliness Inventory, and the Thai Geriatric Depression Scale. The data were analyzed using descriptive statistics, Pearson's product moment correlation, and Stepwise multiple regression.

The results revealed that the majority of older adults (37.5%) had moderate depression. The number of health problems and loneliness were positively correlated to depression. Functional ability and family relations were negatively correlated to depression. Loneliness, family relations and the number of health problems could jointly explain 62% of the variance in depression in older adults. However, functional ability did not emerge as a significant predictor of depression in older adults.

This study suggests that nurses should be aware of depression in older adults. In order to prevent depression in older adults, nurses should aim to prevent loneliness, minimize health problems, and promote family relations.

KEY WORD: HEALTH STATUS/ FAMILY RELATIONS/ LONELINESS /DEPRESSION/
OLDER ADULTS

109 P. ISBN 974-04-5862-9

ความสัมพันธ์ระหว่างภาวะสุขภาพ สัมพันธภาพในครอบครัว ความว้าเหว่ และภาวะซึมเศร้าใน
ผู้สูงอายุ (RELATIONSHIPS OF HEALTH STATUS, FAMILY RELATIONS, AND
LONELINESS TO DEPRESSION IN OLDER ADULTS)

พรเพ็ญ สำเภา 4536578 RAPM/M

พย.ม. (การพยาบาลจิตเวชและสุขภาพจิต)

คณะกรรมการควบคุมวิทยานิพนธ์ : โสภิต แสงอ่อน, Ph.D. (Nursing), พรทิพย์ มาลาธรรม, Ph.D.
(Nursing)

บทคัดย่อ

การวิจัยเชิงบรรยายแบบศึกษาความสัมพันธ์มีวัตถุประสงค์ เพื่อศึกษาความสัมพันธ์ระหว่างภาวะสุขภาพ สัมพันธภาพในครอบครัว ความว้าเหว่ และภาวะซึมเศร้าในผู้สูงอายุ โดยใช้กรอบแนวคิดจากทฤษฎีทางจิตสังคมของภาวะซึมเศร้าในผู้สูงอายุเป็นแนวทางในการศึกษา กลุ่มตัวอย่างเป็นผู้สูงอายุที่อาศัยอยู่ในจังหวัดชัยนาท จำนวน 96 ราย เลือกกลุ่มตัวอย่างด้วยวิธีการเลือกตัวอย่างแบบหลายขั้นตอน เครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูล มี 7 ส่วน ได้แก่ แบบทดสอบหมวดหมู่, แบบสอบถามข้อมูลทั่วไป, แบบประเมินความสามารถในการปฏิบัติกิจวัตรประจำวัน ดัชนีบาร์เทิล, แบบประเมินความสามารถในการปฏิบัติกิจวัตรประจำวัน ดัชนีจุฬา, แบบวัดสัมพันธภาพในครอบครัว, แบบวัดความว้าเหว่, และแบบวัดความเศร้าในผู้สูงอายุไทย วิเคราะห์ข้อมูล โดยใช้สถิติบรรยาย สัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน และการวิเคราะห์ถดถอยพหุแบบขั้นตอน

ผลการศึกษาพบว่า ผู้สูงอายุส่วนใหญ่ร้อยละ 37.5 มีภาวะซึมเศร้าอยู่ในระดับปานกลาง จำนวนของปัญหาสุขภาพ และความว้าเหว่ มีความสัมพันธ์ทางบวกกับภาวะซึมเศร้า ความสามารถในการปฏิบัติกิจกรรมและสัมพันธภาพในครอบครัว มีความสัมพันธ์ทางลบกับภาวะซึมเศร้า และเมื่อวิเคราะห์ถึงปัจจัยที่สามารถทำนายภาวะซึมเศร้าในผู้สูงอายุ พบว่า จำนวนของปัญหาสุขภาพ สัมพันธภาพในครอบครัว และความว้าเหว่ สามารถร่วมกันอธิบายความแปรปรวนของภาวะซึมเศร้าในผู้สูงอายุได้ร้อยละ 62 ($F = 50.87, p < .001$). ส่วนความสามารถในการปฏิบัติกิจกรรมไม่เพิ่มอำนาจการทำนายของภาวะซึมเศร้าในผู้สูงอายุได้

ผลการศึกษาในครั้งนี้ ชี้ให้เห็นว่าพยาบาลควรที่จะตระหนักถึงภาวะซึมเศร้าในผู้สูงอายุ โดยเฉพาะอย่างยิ่งการป้องกันการเกิดภาวะซึมเศร้าในผู้สูงอายุ โดยให้ความสำคัญกับการป้องกันภาวะว้าเหว่ ลดปัญหาสุขภาพ และการส่งเสริมสัมพันธภาพในครอบครัว

109 หน้า. ISBN 974-04-5862-9

CONTENTS

	Page
ABSTRACT (English)	iv
ABSTRACT (Thai)	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
I INTRODUCTION	
Background and Rationale	1
Conceptual Framework	6
Research Questions	8
Research Objectives	8
Research Hypotheses	9
Scope of the Study	9
Expected Outcomes and Benefits	9
Definition of Term	10
II LITERATURE REVIEW	
Basic Concepts about Older Adults	11
Depression in Older Adults	15
Factors Related to Depression in Older Adults	21
Health Status	21
Family relations	25
Loneliness	29
Summary of Literature Review	34

CONTENTS (CONTS)

	Page
III MATERIALS AND METHODS	
Population and Sample	35
Sample size	35
Setting	36
Sampling	36
Instrument	39
Data Collection	45
Protection of Human Subjects	46
Data Analysis	47
IV RESULTS	48
V DISCUSSION	59
VI CONCLUSION	72
BIBLIOGRAPHY	77
APPENDIX	91
BIOGRAPHY	109

LIST OF TABLES

Table	Page
1. Descriptive statistics of demographic characteristics of participant (n = 96)	49
2. Mean, standard deviation, and range of major variables (n = 96)	50
3. Reliability coefficients of the instruments used in the study (n = 96)	50
4. Descriptive statistics of type of health problems and the number of Health problems of the older adults (n = 96)	51
5. Level of functional ability of the older adults (n = 96)	53
6. Level of family relations of the older adults (n = 96)	53
7. Level of loneliness of the older adults (n = 96)	53
8. Level of depression of the older adults (n = 96)	54
9. Pearson product moment correlation coefficients among the studied Variables in from correlation matrix (n = 96)	56
10. Prediction of the independent variables on depression in older adults using stepwise multiple regression analysis (n = 96)	58

LIST OF FIGURES

Figure	page
1. Conceptual framework of the study	8
2. Sampling Procedure	38
3. Normal distribution of residual	106
4. Scatterplot of residual against the predicted values and against the independent variables.	107
5. Normal probability plot of regression standard dependent variable: sum depression	108

CHAPTER I

INTRODUCTION

Background and Rationale

The advancement of medical and healthcare technology results in longer lives of the population all over the world. Life expectancy at birth increased between 2000-2004 from about 67.35 years to 68 years for men and from 72 years to 75 years for women. (Institute for Population and Social Research, 2004). Thailand also joins trend of having an increased number of older population and the increased proportion of older adults to the total. A survey conducted in 1999 reported that there were 5.6 millions people older than 60 years of age (the total number of the Thai population is 60.2 – 61 millions), or 9.3 % of the total population. It is also predicted that in the year 2020, the number of older adults may increase to 10 millions or 15.3% of the total population (Srijitra Boonak & Suthichai Jittrapunkul, B.E. 2542: 23-25). These data reflect that older adults will constitute a large group of population in the future and can be the main target population that has an effect on public health policy and planning. This is because most of the older adults have to face with problems resulting from changes in physical health, mental health, emotion, and society, most of which cannot be avoided (Kasem Tantipalachewa & Kulya Tantipalachewa, B.E. 2538).

Changes in older adults undergo tend to be deterioration rather than growth (Pantrick & Bruno, 1991 as cited in Napaporn Wongyai, B.E. 2542: 1), especially aged- related changes in physical health that have an effect on the function of body systems such as decreased efficiency of the body and resistance to disease. Thus older adults can easily be sick (Bunloo Siripanich et al., B.E. 2531: 81-91). Older adults also face with chronic diseases such as hypertension, diabetes mellitus, cancer, cardiovascular diseases, gouty arthritis, etc., and most of them have more than one disease (Surakul Jenaoprom, B.E. 2534: 19).

Aged-related changes in mental and emotional health originate from fear about loss of loved ones and loss of body function systems. These problems can lead to anxiety about own illness, death, and loneliness. Not only that, changes in social status that originate from retirement can lead to loss of role and function in society, which, in turn, lead to loss of self-esteem. Older adults may feel separated from society to which they used to be (Orapan Lurboontawatchai, B. E. 2543: 190-194).

Thus, it can easily be seen that these changes tremendously affect older adults' living. It means that older adults have to adapt their lifestyle to accommodate those changes. If older adults accept changes in physical health and appropriately adapt their lifestyle to match those problems, then they will have good mental health (Pacharee Tansiri, B.E. 2533: 85). On the other hand, if older adults cannot accept the change in physical health and are unable to appropriately adapt their lifestyle to suit those problems, then they will suffer from stress, discouragement, hopelessness and finally poor mental health (Boonpa Na Nakorn, B.E. 2545: 2). Napaporn Chayowan and John Nodell (1996) studied older adults in Thailand and found that one out of ten older adults have mental health problems such as to feel lonely and low self-esteem these problems increase following through age.

One of the most frequently found mental problems and is significantly important is depression (Banloo Siripanich, B.E.2535: 5). About 20-40% of older adults are older than 60 years old (Valente, 1994: 19), and 50% of older adults are older than 65 years old (Sriwana Tansiri, B.E. 2535: 33). In Thailand, Siripanich, B. (B.E. 2533) studied the prevalence of depression in 1,574 older adults throughout the country. The result of this study showed that 16.5% of this sample suffered from depression. Eight years later, Sukatungka, K. and colleagues (B.E. 2542) studied depression and dementia in 370 older adults in Bangkok, 363 older adults in Ranong province, and 319 older adults in Buriram provinces. The result of this study revealed that approximately 35.1%, 17.1%, and 19.4% of older adults suffered from depression in Bangkok, Ranong, and Buriram respectively.

According to the data mentioned above, depression in older adults has been becoming a problem. In addition, depression in older adults may lead to suicide. It was found that depression is a major cause of suicide in older adults (Suwanna Arunphongphisana, B.E. 2544; Jaruwan Haemathorn, B.E. 2540). Because, when older adults have depression, they feel sad, discouraged, and they entertain negative thoughts (Mental Health Institute, Ministry of Public Health and Psychiatry Institute of Thailand, B. E. 2536). If the problems have been ignored for a long time, then depression might increase in its severity, for instance older adults may have more suicide idea. (Sriwanna Tansiri, B. E. 2535: 23). Most of the studies found that older adults committed suicide more than others (Diamond et al., 1987: 23; Pierre, 1986: 4). These studies are consistent with the study of Brant (1990: 15-18) which found that suicidal ideas of older adults come from depression. Then, depression is a critical mental health problem which tends to continuously increase in its severity.

A study of depression in older adults is important. This is because the finding can be used to equip physicians and healthcare personnel with the necessary knowledge and information to deal with depression in older adults. However, most of the studies in this field addressed personal factors that have a relationship with depression in older adults such as sex (Komlin Satra, B.E. 2531; Blazer et al., 1991; Pender, 1993; Valente, 1994), age (Kanokrat Sukatungka et al., B.E. 2542; Blazer et al., 1991), income (Blazer et al., 1991), marital status (Koenig, et al., 1998), physical illness (Chadchen Chantarapat, B.E. 2543; Suwannee Mahaguynan, B.E. 2538; Phifer, Merrel, 1986 as cited in Steiner & Marcopulos, 1991), nutritional status (Wanna Rungwanicha, B.E. 2543; Arunee Nakapong, B.E. 2539) and functional abilities (Sirirat Wichittrakultaworn, B.E. 2545). These factors can explain only some extent of depression, but there are other factors such as socio-psychological factor that can explain the development of depression in older adults' as well (Zerhusen, 1991: 17; Nantika Tawichacaht et al., B.E. 2536: 196).

According to the psychosocial theory, the development of depression in older adults is linked to environmental, social and psychological condition of older adults (Jongrak Suppakijcharoen, B.E. 2538: 27). The psychosocial theory explains that

depression in older adults is a reflective action of persons to any disappearance (Miller, 1995: 495) such as loss of loved ones or subjects, loss of image, loss of social status, loss of self-esteem, ect. Studies conducted by Jongrak Suppakijcharoen (B.E. 2538), Patcharee Tansiri (B.E. 2533), and Srireon Kaewkangwan (B.E. 2533) found that factors relating to depression in older adults are self-concept, role changes, family changes, family relations, health status, and loneliness. However, these studies investigated the relationship of only one or two psychosocial factors to depression in older adults, therefore, limiting the understanding of development of depression in older adults. In addition, some variables such as family relations, although had been studied in many studies, their definitions and measurement were used differently. It is obvious that studies conducted to understand depression in older adults are limiting. As a result, it is important to do more research to expand knowledge on the development of depression in older adults. Therefore, this study will help expand knowledge on the development of depression in older adults by examining the predictor roles of psychosocial factors on depression in older adults. The psychosocial factors in this study are selected based on literature review and psychosocial theory on depression including loneliness, family relations, and health status.

Loneliness is one of the psychosocial factors that has a significant effect on depression in older adults, because older adults tend to be distant from their children and grandchildren when they work in different cities and to be abandoned by their relatives (Supanee Nantachai, B.E. 2534: 2). At the same time, they have to deal with loss of their loved ones and belonging. These have significant effects on older adults' mental health, on top of the fact that most older adults have more sensitive health status (Wanpen Eiumjoy & Supanee Triumwisit, B.E. 2535: 18). These problems can tremendously increase suffering to older adults (Francis, 1981 as cited in Rodger, 1989: 16), yet it also depends on the cause and severity of the environment and ability to adapt of each older adults. Older adults who have good adaptation could live their happily life. Conversely, older adults who have less adaptation would face with loneliness, discouragement, hopelessness and separation from society, all of which can lead to depression in the end.

Family relation is one factor that has related to depression in older adults because this factor consists of love, care, interaction, and support (Pornpaj Kingkaew, B.E. 2538:16). However, rapid social changes nowadays can lead to a decline in family relationship, especially relationship between family members and older adults. These problems can make older adults feel worthless, crave attention, and lose self-esteem. These, coupled with lack of respect, can bring about suppressed feeling and hurtfulness (Sukanya Rojprasert, B.E. 2541: 3). If the problems persist for a long time without being solved, depression can finally result.

Berkman et al. (1986: 372-288) found that physical health status is one factor that has a relationship with depression. It means that older adults who have poor health status have more chances to be depressed than those with good health status. This study is consistent with the study of Murrell et al. (1983: 173-175), which found that health status has a relationship with depression in both male and female older adults. Older adults with poor health status are likely to suffer from depression more than those with good or moderate health status. Then, health status is a significant factor because deterioration of health status can reduce functional abilities, making older adults rely on others more. Loss of self-confidence, discouragement, low self-esteem (Tanomkwan Taweeboon & Somjin Petchpansri, B.E. 2542: 6), and loss of encouragement can result in depression (Banloo Siripanich, B.E. 2531: 29).

In summary, health status and psychosocial factors including family relations and loneliness were found to be significant factor relating to depression in older adults. A review of literature has indicated that depression in older adults is an important problem, and that a study of the relationships of selected health status, family relations, loneliness, and depression in older adults would shade more light on important issues, which can benefit healthcare teams who wish to promote mental health of older adults and to enable them to maintain their quality of life.

Conceptual Framework

The conceptual framework of the present study was developed from a literature review on theories related to depression, and older adults. It was found that there are several theories which attempt to explain the cause of depression in older adults such as Biology theory, Psychology theory, and Social theory. The conceptual framework of this research was developed from the psychosocial theory for depression in older adults. This theory explains that depression is a reflective action of persons to any disappearance (Miller, 1995: 495) such as loss of loved ones or subjects, loss of image, loss of social status, loss of self-esteem, etc. These losses result in reduced ego, which, in turn, leads to loss of perception, decision making, problem solving, and reasonableness, preventable older adults to free themselves from reduce sadness and desperation in the end (Pranee Wattanachot & Nopadol Soomboon, B.E. 2538: 159-162). In order to deal with these problems, individuals need to depend on their mental adaptation mechanisms (Chorladda Pansena, B.E. 2536: 152), If older adults are able to make use of adaptation mechanisms appropriately, then they will get emotional equilibrium and able to eliminate the sadness. In converse, if they are not able to appropriately use this adaptation mechanisms, feeling of then they tend to develop negative ideas about themselves, and feel that they themselves are worthless (Aumpiwan Pumsrisawat, B.E. 2541: 122), resulting in depression.

For older adults who have to face with different changes in life, their mental health status can be adversely affected. The important changes and significant factors inducing depression are as follows:

Deterioration of physical health can result in loss of self-esteem in older adults. Deterioration of physical health can reduce functional ability in older adults and makes them prone to suffer from illness. Thus, older adults need to rely on a support from others more and lose self-confidence.

Family relations can be used to explain the development of depression in older adults through psychosocial theory by loss of social role and loss of self-worth.

In current society, the value of younger generation toward older adults has changed. The older adults are regarded as older family members (Sriwanna Tansiri, B.E. 2535: 23) who no longer play any important role in the family. This helps increase the distance between older adults and their descendents. Older adults might feel lack of love, care, respect, and assistance they used to receive. As a result, older adults feel that they are burdensome, they suffer from anxiety, lack of self-worth, and lack of pride (Pornpaj Kingkaew, B.E. 2535: 2-3)

Loneliness in older adults can result from lack of meaningful relationship with others such as friend. After retirement, older adults no longer have close persons due to death or relocation work, leading to their loss of position, responsibility, and love and sense of belonging. All these losses can lead to depression in older adults.

Therefore, deterioration of health status, loss of family relations, and loneliness are expected to be factors that have a relationship with depression in older adults. The find of this research could enhance understanding of depression in older adults (see Figure 1).

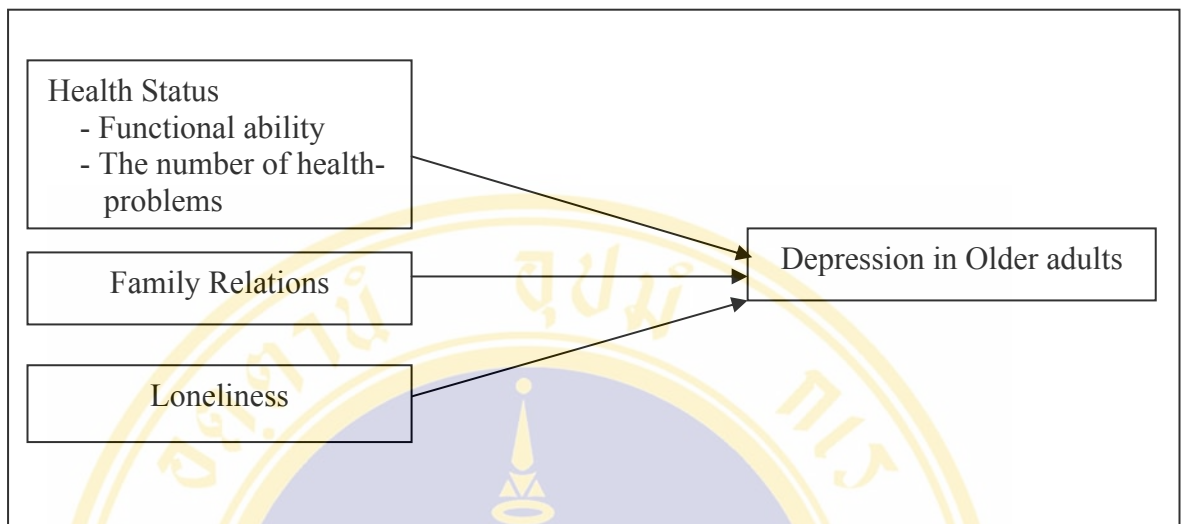


Figure 1: Conceptual framework of the study

Research Questions

1. What is the level of health status, family relations, loneliness, and depression in older adults?
2. Is there a relationship of health status, family relations, and loneliness to depression in older adults?
3. Can health status, family relations, and loneliness predict depression in older adults?

Research Objectives

1. To explore the health status, family relations, loneliness, and depression in older adults.
2. To determine the relationship of health status (functional ability, the number of health problems), family relations, and loneliness to depression in older adults.
3. To determine the extent to which health status, family relations, and loneliness can jointly predict depression in older adults.

Research Hypotheses

1. The number of health problems is positively related to depression in older adults.
2. Functional ability is negatively related to depression in older adults.
3. Family relations is negatively related to depression in older adults.
4. Loneliness is positively related with depression in older adults.
5. Health status, family relations, and loneliness can jointly predict the depression in older adults.

Scope of the Study

This descriptive research aimed to study relationships of health status, family relations, and loneliness to depression in older adults. The sample consisted of 100 older adults who were 60 years old and older and who lived in Chainat Province. The data were collected during August to September 2004.

Expected Outcomes and Benefits

1. Health care teams will be enabled to raise the awareness of depression in older adults related to health status, family relations, and loneliness.
2. The results from this study will provide health care providers knowledge to Assess the older adults who are at risk for depression and to seek appropriate methods to prevent them from developing depression in the future.
3. The results will increase understanding of health status, family relations, and loneliness in relation to depression in older adults so as to provide the appropriate nursing care, treatment and rehabilitation for depressed older adults.

Definition of Terms

Health Status is defined as the physical health status of older adults including functional ability and the number of health problems as follows:

Functional ability is defined as the self-reported ability to perform activities of daily living both basic and extended. In this study functional ability was measured by the Modified Barthel Activities of Daily Living Index (MBAL) and Chula Activities of Daily Living Index (CAI) developed by Suthichai Jitapankul et al. (B.E. 2537).

The number of health problems are defined as the number of health problems, diseases, or impairment that the older adults identify. Health problems were measured by the health problems checklist developed by the researcher.

Family Relations is defined as an individual's perception of older adults regarding love, care, opinion exchange, shared recreation, significance, recognition of others' respect, and relaxation in family. Family Relations was measured by the Family Relations Scale of Pongpaka Shurnsangnet (1995) adapted from the conceptual framework of Friedman (1986) and Morrow & Wilson (1961).

Loneliness is defined as an emotional state of feeling empty, abandoned, and alone that is caused by lack of meaningful relationships with others, leading to loneliness, hopelessness, self-sympathy, and feeling of worthlessness. Loneliness was measured by the UCLA Loneliness Scale translated by Supunnee Nantachai (B. E. 2534).

Depression is defined as the mental and emotional disorder including sorrowfulness, anxiety, and hopelessness that can induce alteration of health status and behavior, and leading to pessimistic ideas about self, society and future. Depression also brings about reduced attention and increased indifference to the surrounding. In this study depression was measured by the Thai Geriatric Depression Scale (TGDS) developed by Train the Brain Forum Committee of Thailand.

CHAPTER II

LITERATURE REVIEW

The study aimed to investigate the relationships of health status, family relations, and loneliness to depression in older adults. In this chapter, relevant literature is reviewed on the following topics:

1. Basic concepts about older adults
2. Depression in older adults
3. Factors related to depression in older adults
 - Health status
 - Family relations
 - Loneliness

Basic concepts about older adults

Definition of older adults

The definitions of older adults vary in across countries, depending on retirement age of working, health status, social status, economy, and culture of each country (Laaung Suwitayaporn, B.E. 2534: 10). Stanley and Beare, (1994: 13) states that “senility is normal physical alteration inducing persons’ behavioral alteration for environmental adaptation. Then older adults have complicated physical, mental, emotion and social alteration”. Whereas Pensri Linsuwanon, (B.E. 2543: 12) points out “senility is a process of alteration of personal development. The difference between senility and pathogenesis is that senility cannot be prevented or avoided. Although those alterations come from health deterioration, older adults can still have appropriate lifestyle by preparing their own life before the onset of senility because if older adults already have preparation, then they can prevent functional deterioration.

At present, in Thailand, older adults are persons who are older than 60 years old following the retirement criteria (Peerakit Kumnounsilp et al., B.E. 2523: 4-8). This is consistent with the definition of the World Assembly on Aging which defines

older adults as persons being aged more than 60 years old. This criterion is used all over the world. (Kodchakorn Sangkhachart, B.E.2536).

In general, older adults are classified into four intervals by using the Psycho-Social-Biological criteria as follows (Craig, 1991; Hoffman et al., 1998 cited in Sreion Kaewkungwan, B.E.2545: 514):

1. The Young Old. The adults in this age group are between 60 and 69 years old. The older adults in this age group face many critical changes in life, such as retirement, loss of close relatives or spouse, decreased income, and loss of social roles. Generally, the older adults in this age group are healthy and still have much capability, but some persons sometimes have to depend on others. Adjustment in this age group is an engagement procedure in that the older adults still participate in activities both inside and outside their family.

2. The Middle Aged Old. The adults in this age group are between 70 and 79 years old. There is more deaths among close friends and relatives. The participation in social activities has decreased. The adjustment of this age is the disengagement procedure in that the older adults will stop participating in other activities.

3. The Old Old. The adults in this age group are between 80 and 89 years old. The older adults have more difficulty adapting to the environment because they need more privacy, but the environment has to stimulate efficiency of older adults. Moreover, the older adults in this period need more aids, and most of them keep reminding themselves of the past events.

4. The Very Old Old. The adults in this age group are between 90 and 99 years old. The older adults in this age group face more health problems. They should have activities that satisfy them and that they want to do, but these activities should not require competition. The older adults in this age group have well passed many of the crises in life. This period of life is peaceful and includes self-satisfaction.

Changes in older adults

The older adults have to face a variety of unavoidable changes including: physical changes, social and cultural changes, and psychological changes. The three obvious changes are as follows (Wasana Ternwong, B.E. 2540: 10-14; Sulakul Jenoprom, B.E. 2534: 16-17; Eliopoulos, 1993: 45-46):

Physical changes

Physical changes can induce health problems, reduced efficiency, minimized disease resistance, and increase risks of sickness (Banloo Siripanich et al., B.E. 2531: 81-91). Most of the health problems are arthritis, hypertension, cardiovascular disease, hearing loss, glaucoma, stroke, incontinence, and diabetes mellitus.

Social and cultural changes

The present changes in society and culture affect the older adults as follows (Surakul Jenobrom, B.E. 2534):

1) The change in social status. The physical deterioration causes the older adults to change their role as family leader to be only dependent on offspring. The loss of their power and role makes them feel unimportant and creates problems of being a burden to others. The above mentioned losses also cause the older adults to have plenty of spare time and they, therefore, feel lonely.

2) Being abandoned. The social change from the original society to the new era society and the production system change from the agriculture to industrialization has created the mobilization of labor force to urban areas and also the abandonment of the older adults in hometown. The trend of becoming nuclear families together with the economic crisis cause families to be unable to afford taking care of the older adults. It has caused an increase in the incident of older adults being left alone. These have lead to loneliness in the older adults (Peerasith Kumnounsilp et al., B.E. 2523).

3) The older adults have been less respected. In the past, older adults get respect from the younger being more as experienced and knowledgeable persons. However, this culture tends to change following a western culture that believes in privacy and the thought that “older adults are behind the time persons” at present. Such notions can induce the gap between older adults and the younger (Supatra Suparp, B.E. 2531: 63).

Psychological changes

The mentality changes are related to the physiological and social changes because deterioration of organisms affects older adults' psychological well being. It also obstructs inter-personnel communication and adjustment to surroundings. The psychological changes of the older adults are caused by the following: (Surakul Jenobrom, B.E. 2534):

1) The loss of meaningful persons such as friends or close relatives of the same age who have died or moved to another place causes the older adults to feel isolated. In particular, the death of the spouse is a crucial factor for the older adults' depression. The loss of the relations can induce depression (Christ & Hohlock, 1982: 32)

2) The loss of social and economical status is caused by retirement from work. While the social relationship has been decreasing, older adults feel loss of their role, income, self-worth, friends and relationships in society.

3) The lack of family relationship. Because the adult children of the older adults have their own family and the trend is to become a more nuclear family, the relationship between the older adults and their adult children has lessened. The role of the older adults as a consultant or advisor has also become less. Then the older adults have to live alone and feel low self-esteem.

4) Sexual restriction. The change in chemicals in the body causes the older adults to have no capability for sexual activity even it is desired. In addition, the social attitude is that the older adults should not have sexual activity, because it is an inappropriate behavior. These obstruct the older adults' sexual need, which much affects their mentality.

As mentioned above, each type of changes in older adults have an impact on one another. The ability of older adults to adapt to these changes may be different in each person, depending on many factors such as health status, economical status, and attitude to society. If society gives encouragement and importance to older adults, then older adults would have good adaptation and happiness in their life. Conversely, if older adults do not receive encouragement and importance, then they would feel the loss their own value, causing them to lose heart, and hope, further making them unable to adapt their life to those changes. Then this can definitely induce depression.

Depression in older adults

The depression theories

1. Biological theories of depression

1.1 Genetic theory.

The strongest evidence of genetic contribution to the etiology of depression comes from twins and families (Blazer, 1982: 55-56). The average risk for affective disorders among relatives of individuals with affective disorder is 14.3% for parent, 14.8% for children, and 12.9% for siblings (Slater & Cowie, 1971 as cited in Blazer, 1982). According to one twin study, if one twin develops the disorder the risk for other is 68% for monozygotic twins and 23% for dizygotic twins (Price, 1972). Furthermore, in examining women's higher risk for depression, genetic researchers have come to believe that there might be a gene for depression located on the X-chromosome (Paykel, 1991; Weissman, 1981).

1.2 Neuroendocrinology

Depression has been found to involve several system dysfunctions (Stuart, 1995; Syvalahti, 1994). Considerable research has been conducted on the relationship between hypothalamic-pituitary-adrenal (HPA) axis activity and depression (Stuart, 1995; Syvalahti, 1994). The hypothalamus and pituitary gland are connected with limbic and thalamic regions of the brain involved in regulation of sleep, appetite, reward, and libido (O'Toole & Johnson, 1997). Therefore, possible dysregulation of the HPA axis manifests as typical symptoms of depression such as decrease in weight, changes in libido, dysmenorrhea, and sleeping disorder (Stuart, 1995; Syvalahti, 1994). In addition, it has been found that major depression is associated with HPA axis hyperactivity, as indicated by increased circulating corticotrophin, cortisol and prolactin concentrations, and decrease circulating thyroid-stimulating-hormone (TSH), somatotropin, and luteinizing concentrations (O'Toole & Johnson, 1997; Stuart, 1995; Syvalahti, 1994).

1.3 Biochemical Factors

It is currently believed that depression is a biologically heterogeneous disorder. The factors control the nervous system, and neurotransmitter abnormalities can probably cause clinical depression. The two main neurotransmitters are serotonin and norepinephrine, both of which are catecholamine. Low levels at the synaptic

receptor site in the brain cause depression (Delgado, et. al., 1992). The uses of antidepressant drugs support this biomedical factor because all antidepressant drugs inhibit the reuptake of serotonin and norepinephrine increasing the amount of time these neurotransmitters are available to the post synaptic receptors in the central nervous system (CNS).

2. Psychological theories of depression

2.1 Psychoanalytic theory of depression

Freud (Freud, 1963 as cited in Blazer, 1982: 79) believed that after the loss of a significant person, for whom the individual harbored extreme ambivalence, hostility toward this person is directed toward the self, through the process of introjection. Therefore, two themes central to the psychoanalytic theory of depression are loss and aggression. According to psychoanalytic theory, depression is triggered by a loss, and depressive mood is the result of aggression turned inward toward the self. Depression is a reaction to a real or a symbolic loss. When people lose a crucial source of security, they may become depressed. A sense of helplessness and hopelessness is central to experience depression.

2.2 Learned Helplessness

One of the most popular theories of the cause of depression is Martin Seligman's theory of learned helplessness. Seligman (Seligman, 1978 as cited in Komlin Satra, B.E. 2531: 15) stated that although anxiety is the initial response to a stressful situation, anxiety is replaced by depression if the person feels that the self has no control over the outcome of a situation. A person who believes those undesired events is his or her fault and that nothing can be done to change it is prone to depression. The theory of learned helplessness has been used to explain the development of depression in certain social group, such as the older adults, people living in ghettos, and woman.

2.3 Cognitive theory

Albert Ellis, a well-known cognitive behavior therapist, views emotional disturbance as the product of irrational or illogical thinking. Ellis's rational emotive behavioral therapy has had success with people who are shy, non assertive in social situations, experiencing marital problems, or have fear surrounding sexual situation, as well as a great deal of other problematic behaviors. Expanding on Ellis's work, Beck.

applied the cognitive behavior therapy to depression. Beck purposed that people acquire a psychological predisposition to depression through early life experiences. These experiences contribute to negative, illogical, and irrational thought processes that may remain dormant until they are activated during times of stress (Beck, 1995). Beck found that depressed people process information in negative way, even in the midst of positive factors that affect the person's life. Beck believes three automatic negative thoughts are responsible for people becoming depressed. These three ideas are called Beck's cognitive triad. They are a negative view of self, a pessimistic view of the world, and the belief that negative reinforcement (or no validation for the self) will continue in the future.

3. Social theory

The concept of social theory is similar to the psychological concept. On the social side, causes of depression will be focused on interaction between person and environment. Besides, Bart (Bart, 1977 as cited in Blazer, 1982: 11) states that depression results from social structure inducing persons' lack of role and inability to determine their life.

Definition of depression

Netnapa Jaturongsang (B.E. 2540: 22) states that "depression is emotional disorder that can happen in every period of life, especially older adults and can induce the alteration of self-concept in negative side." This definition is consistent with Valent (1994: 18) which points out that depression is a mental status that makes older adults feel downhearted and sorrowful, while experiencing driving force disappearance and activity ignorance.

In conclusion, depression in older adults may be defined as one of the most mental and emotional disorders in older adults that make older adults feel downhearted and sorrowful, while experiencing driving force disappearance and activity ignorance.

Diagnosis of depression in older adults

Depression in older adults is different to depression in other age groups (Wanpen Showsherng & Karaket Promdee, B.E. 2544: 14). Sompob (B.E. 2533: 102) stated that depression in older adults is distinguished for express more physical symptoms, whereas emotional symptoms are not quite obvious. Gurland (1976: 283-292) states that signs of depression in older adults are changes in sleep, appetite, social

behavior, perception and activity of health status, and vigorousness. These alterations can make older adults reduce or lose intention to do any daily activity and then induce hopelessness, whereas Yasavage (1983) stated the signs and symptoms of depression in the older adults are unhappiness, dejection, pessimism, guilt feelings, irritability, decrease in satisfaction, low self-esteem, helplessness and hopelessness. Depression, as a clinical illness defined by the Diagnostic and Statistical Manual (DSM-IV) consists of: 1) depressed mood; and/ or 2) loss of interest or pleasure; 3) weight loss or gain; 4) sleep disturbance; 5) psychomotor agitation or retardation; 6) fatigue; 7) feelings of worthlessness or guilt; 8) difficulty concentrating; 9) recurrent thought of death or suicide

To be diagnosed with depression, the person must exhibit at least five of symptoms and must include 1 or 2, over at least a two week period and this represents a change from previous functioning (APA, 2000).

Level of Depression

Kumwan Weesapen (B.E. 2541) divide levels of depression into three levels as follows:

1. Mild depression is a condition that person face with the disappearance, hopelessness, and feeling abandonment of induces depression and also has impact on health status. This depression will have short duration, if causes of depression are eradicated, and then those persons will recover from depression. However, if the persons still have depression for a long time, then they will change in opinion, feeling, behavior, resulting in moderate depression in the end.

2. Moderate depression, is more severe and has more impact on family and lifestyle, but the persons can still do daily activity though it is not quite complete. With this depression, persons experience different feelings and behaviors including unhappiness, worthlessness, loss of concentration, insomnia, fatigue, slow movement, social desertion, and rejection of social life, some may have suicidal thought.

3. Severe depression is a condition which occurs after persons had deep depression for a long time. Persons cannot do their activity and withdraw from truth. They may have irritability, hallucination, and attempted suicide.

Impact of depression on older adults (Orapan Tongtang, B.E. 2544: 19-20)

1. As for impact on themselves, it has been found that suicide rate is high in older adults with depression.
2. Prognosis of physical illness is worse because depression has an impact on risk health behavior in patients such as smoking, alcohol abuse, and drug addiction.
3. Impact on economy includes loss of income for health care services, and patients cannot work while their relatives have to spend time to care the patients.

Assessment of depression in older adults

Assessment of depression in older adults is complex because depression is a condition whose signs and symptoms can be expressed in many dimensions (Jantima Ongkosit & Narong Supatharapan, B.E. 2522: 305-316). There are differences in definitions and cause of depression. Besides, the symptoms of depression can also accompany other diseases (Kranich, 1995: 61-64). Then, assessments of depression in older adults differ in assessment methods depending on measurement tools. A present, there are many assessment tools which are categorized into two type as follows (Greist & Greist, 1979; Greist & Jefferson, 1992; Jacoby, 1997; Kaplan, Ficedman & Sandock, 1980 as cited by Chadjan Jantrapat, B.E. 2543: 23):

1. Depression assessment methods by observation including Cronholm-Ottosson Scale, Hamilton Rating Scale for Depression (HRS-D), Raskin Depression Scale, Beah-Rafaelsen Melancholia Scale, and Montogomery-Asberg Depression Ration Scale (MNDRS).
2. Self assessment methods including Beck Depression Inventory (BDI), Zung Self Rating Depression Scale, Zenssen Adjective Checklist, Walkfield Self-Assessment Inventory, Center for Epidimiologic Studies Depression Scale (CES-D Scale), and Thai Geriatric Depression Scale (TGDS)

In Thailand, popular assessments of depression in older adults include Beck Depression Inventory (BDI), Zung Self Rating Depression Scale, Thai Geriatric Depression Scale (TGDS), Center for Epidimiologic Studies Depression Scale (CES-D Scale), and Hamilton Rating Scale for Depression (HRS-D). In this research, Thai Geriatric Depression Scale (TGDS) was used as the assessment method because this tool is consistent with the Thai culture (Nipon Pongwarint, B.E. 2537: 6) as it was developed by 14 institutes of Thailand. The questions in the scale covered definition of

depression which elicited only “Yes” or “No”. Thus, it was easy to use, readily understandable, and less time consuming to answer, so it was widely accepted by physicians. The content validity test of this instrument was 0.93 (number of sample of older adults = 275).

Numerous research on depression in older adults in Thailand have used the Thai Geriatric Depression Scale (TGDS) as assessment tool as follows:

Kanchana Funghaisan (B.E. 2539) studied the factors that have relationship with depression in older adults in urban Kumpangpetch Province using 330 older adults (age equal to or more than 60 years old) as the sample. This study found that 20.3% of older adults had mild depression, 11.5% had moderate depression, and 7.9% had severe depression.

Kasem Lengwehastit (B.E. 2540) examined the factors affect depression in older adults in Meung District, Kumpangpetch Province, using the sample of 398 older adults (age equal to or more than 60 years old). This study found that 18.8% of older adults had mild depression, 9.6% had moderate depression, and 1.0% suffered from severe depression.

Kanokrat Sukatungka et al., (B.E. 2542) investigated the relationship between depression and dementia with personal factors of older adults in urban communities in Bangkok (370 cases) and rural communities in Burirum and Ranong Province (682 cases). When categorizing subjects by type of community, this study found that prevalence of depression in older adults in Bangkok, Ranong and Burirum were 35.1%, 17.1% and 19.4%, respectively, but, when focused only on older adults in rural community, this study found that 18.2% of older adults experienced depression. All in all 24.1% of older adults had depression when considering both rural community and urban community.

Pensri Linsuwanon (B.E. 2543) studied depression of older adults in Rongmeung Subdistrict, Pratumwan District, Bangkok, using the sample of 350 older adults (age equal to or more than 60 years old). This study found that 22% of older adults had depression. In particular, of these, 64.9% had mild depression, 24.7% had moderate depression, and 10.4% had severe depression.

Chadjen Jantarapat (B.E. 2543) studied relationships between selected factors and depression of older adults in the hospital. The subjects were 120 older

adults who were admitted in the hospital (age equal to or more than 60 years old). This finding revealed that 61.7% of older adults suffered from depression. Of these, 37.5% had mild depression, 21.1% had moderate depression, and 2.5% had severe depression.

From the review of literature and related research, depression in the older adults is major health concerns that can be life threaten if not recognized and treated. It may lead to severe depression, neurosis, psychosis and suicide. The causes of depression have not been determined, although many theories attempt to explanation. It is likely that is cause by a combination of biological, psychological and sociological factors.

Factors related to depression in older adults

Health status

When age is increasing, functional systems in the body will be deteriorated. These conditions induce physical illness in older adults including chronic diseases. Such alteration can be divided as follows (Chusak wechpat, B.E. 2531: 20-38; Surakul Jenobrom, B.E. 2534: 11-19):

1. Integumentary system: The number of epidermal cell and elastic fiber will be reduced, and elasticity of epidermis will be lessened, just like water and lipid under the epidermis . Epidermis will be dry, itching, and it can crack easily, leading to infection proneness whereas the epidermis will have cumulative pigment on the skin, resulting in dark spots on the arms, face, and the back of the hands. Apart from hair loss, the hair will become grayish, and it can easily become dry and fallout because of reduced blood circulation in the epidermis of the head. Also growth rate of nails will be slower, and the nails become weak and can crack easily.

2. Musculoskeletal system: The bone will corrode and junction of spine will contract. This occurs with loss of elasticity, thinning, fragility, and easily cracking due to loss calcium in the bone and vitamin D deficiency.

3. Cardiovascular system: Ability to work of the heart will change because the heart muscle has too much calcium, leading to cardiac arrhythmia. Cardiac output will be reduced, and then blood that goes to all organs will also be reduced, especially

the peripheral organs. This condition often induces nausea in older adults. Besides, blood vessel will constrict and resist blood flow, causing hypertension.

4. Respiratory system: Efficiency of lungs will be reduced because of changes in the chest muscle and sternum that limit movement of the chest. Elasticity of lung tissues and bronchi will also be reduced. Therefore, the lungs will have incomplete extension and the volume of air remaining in the lungs will be increased. Then the body receives insufficient oxygen, leading to low volume of oxygen in blood. As a result, older adults will easily have to gasp for breath.

5. Digestive System: Because the liver produces less bile, there is reduction of contraction and absorption of the stomach and small intestine causing food to remain in the digestive tract, leading to easily flatulence and constipation.

6. Excretory system: The excretory system is deteriorated. The kidneys reduce excretion and their ability to concentrate or dilute urine will decrease. Specific density of urine and minimization of urine bladder lead to easy dehydration. Male older adults may have difficulty urinating from BPH, while female older adults may suffer from urinary incontinence.

7. Nervous system and special sense: Ability of CNS is reduced due to deterioration of brain cells. Older adults, as a consequence, suffer from reduced reflex reaction, dementia, and loss of memory, especially memory of recent events, while still retaining memory of events in the past.

Eye vision is poorer. Efficiency of nervous system of the eyes, eye muscles, and eye lens is reduced. In general older adults will become farsighted. Efficiency of hearing is reduced and older adults can become hearing-impaired or deaf. Smell perception is also reduced.

8. Reproductive system: Males face with BPH, whereas females face with reducing in size of the ovary. Sexual desire is reduced. Male older adults also face with erectile dysfunction and semen reduction which cause older adults who still have sexual desire to feel oppressed and have mental health disorder later on.

9. Endocrine system: Pituitary gland reduces its functions, and this has an effect on other endocrine glands controlled by the Pituitary gland leading to anorexia, exhaustion, and decrease in size of reproductive organs. Besides, the function of thyroid gland is diminished, so productions of hormone decrease, leading to slower

general behavior of older adults. Liver function is reduced, therefore secreting less insulin. This makes blood sugar increase, leading to diabetes mellitus in older adults.

These alterations cause illness and other health problems in older adults, and they affect their ability to do daily activities (Eliopoulos, 1997). At present, it is a significant medical and healthcare problem in Thailand. Five of the most important illnesses suffered by older adults are joint pain, dizziness, insomnia, ocular disease, and fainting, respectively (The National Statistics Office, B.E. 2537: 29).

The survey of SWET project (A survey of the Welfare of Elderly in Thailand) has reported that sicknesses of older adults are back and waist pain (68%), arthritis (40%), hypertension and peptic ulcer (22%), heart disease (13%), and ocular disease (21%) (Napaporn Chayowan and John Nodel, B.E. 2539: 146). This report is consistent with the result of a survey health status of older adults in 1995 (Janpen Chuprapapan, B.E. 2539: 141) which found that diseases of older adults are hypertension (18.1%), arthritis and degenerative of joint (16.9%), peptic ulcer (13.1%), ocular disease (11.1%) and heart disease (8.1%).

Based on all of the studies reviewed, illness of older adults is not different from what was found in survey of health status in 1980, which found that 58 % of older adults have illness e.g. cardiovascular disease, musculoskeletal disease, eye and ear disease, respiratory disease, gastrointestinal disease, and excretion disease (Peerasith Kumnounsilp, et al, B.E. 2523: 161).

Relationship between health status and depression in older adults

The alterations of functional systems of older adults induce physical health disorder, and they also have an effect on mental health because physical health and mental health are closely related. When older adults have physical illness, they tend to depression (Banloo Siripanich, B.E.2533: 43), so alteration of health status and depression probably are associated with each other.

In other countries, the relationship between health status and depression in older adults has widely been explored. For example, Berkman et al. (1986) studied level of depression that had a relationship with health status and functional systems of older adults. The subjects were 2,806 older adults (aged more than 65 years old) and the data collection tools were CES-D, functional system assessment evaluated by

Guttman Scale, and mental perception assessment evaluated by Pfeiffer Scale. The finding revealed that average score of depression in the sample group who had a chronic disease and loss of physical efficiency (mean = 13.51) was statistically significantly higher than that of the sample group who did not have problem of functional systems (mean = 4.86) ($p < 0.05$). This was consistent with the study of Murrell et al. (1983) which investigated prevalence of depression and factors that had a relationship with depression in older adults. CES-D and health status assessment of Belloc et al. were used with 2,517 older adults. They found that average score of depression in the sample group who had health problem (mean = 16.05) was statistically significantly higher than that of the sample group who were healthy (mean = 4.74) ($p < 0.001$).

In Thailand, Chadjen Jantarapat (B.E. 2543) studied a relationship between selected factors with depression in 120 older adults using the TGDS and assessment of ability to do daily activities of Bathel (Bathel Index) as data gathering tools. This study found that the ability to do daily activities had statistically significantly negative relationship with depression of older adults in hospital, which was consistent with Kanjana Funghaisal (B.K.2539) who studied factors that had relationship with depression in older adults. The sample consisted of 330 older adults (aged more than 60 years old), and the TGDS, assessment of ability to do daily activities of Bathel (Bathel Index), and interview form about health problems in older adults were used to collect data. This study found that own illness was one variable indicating health status. It also found that own illness had a statistically significantly positive relationship with depression of older adults ($r = 0.63$, $p < 0.05$) and that ability to do daily activities had statistically significantly negative relationship with depression of older adults ($r = -0.21$, $p < 0.05$). Besides, Saiyont Charoenkum (B.E. 2535) studied factors related to depression of older adults in rural areas. The subjects were 350 older adults who were older than 60 years old living in Banphotpisai District, Nakornsawan Province using depression assessment (QD2) and health status questionnaire of Nedra and Belloc (1965), translated into the Thai language by Winyu Dechtaradol. It was found that health status had a statistically significantly negative relationship with depression of older adults ($r = -0.35$, $p < 0.05$).

From the literature reviewed, it can be concluded that deterioration of physical health causes older adults to face with a health problems such as reduction of ability to do daily activities and other diseases. These conditions have an effect on mental health of older adults because physical health has a relationship with mental health. When one bodily system is affected, other systems can also be impacted. Then, the ability to do daily activities and personal illnesses may have relationship with depression. However, according the literature review, deterioration of physical health in older adults had been studied only in term of health problems and the abilities of older adults in performing basic activities of daily living such as washing the face and eating. None of study had looked at the complicated activities of daily living in older adults such as using public transportation, doing housework, and preparing food, which are expected to be important for older adults. Therefore, to increase understanding of the impact of deterioration of physical health in older adults on depression, it is very interesting to study deterioration of physical health in older adults in term of health problems, abilities of older adults to do basic activities of daily living and complicated activities of daily living. The findings of this study is expected to be useful and increase awareness for caregivers or healthcare staffs on the impact of deterioration of physical health in older adults on depression and, therefore, should pay more attention to health assessment and health care in older adults.

Family relations

Definition of family relations

Komla Sangseetong (B.E. 2536: 8) defines family relations as the relationship based on one's own role to other members in the family. If the relationship involves love, warmth, and harmony in the family, then the relation is good. Conversely, if the relations involve conflicts or hostile feelings in the family, then the relation is poor.

Morrow and Wilson (Morrow & Wilson, 1961: 502) explained that family relations include emotion and environment of support in the family, opinion exchange, shared recreation, mutual love and attachment, compassion, harmony, recognition of others' respect, significance and happy cohabitation.

Element of family relations

According to Grandall (Grandall, 1980 as cited in Pornpaj Kingkaew, B.E. 2538, 17-18), family relations is a primary relationship including

1. Number of role

A family relation means members playing more than one role. For example, the parent can be instructor, or supporter. Family members have interaction in many activities that result from shared interest and value, belief and reality among personal members.

2. Communication

Primary relationship is signified by open communications enabling members to have independent chances to speak up and exchange opinions.

3. Emotion

Primary relationship is established from the emotion of members, and then it induces love, understanding, attachment, conflict, and indignation among members of the family.

4. Transferability

The setting of primary relation depends on individual persons, and it cannot easily transfer to others. This relation involves interaction between one person and another, and it has specific feeling and is difficult to change.

In this study, family relations is perception of older adults to activities of members in the family that are related to love, exchange of opinion, compassion, support, respect and shared recreation among members using the concept of Friedman (Friedman, 1986) and Morrow (Morrow & Wilson, 1961: 501-510) as cited in Poungpaka Shurnsangnet (B.E. 2538).

Thomson and Streib (Thomson & Streib, 1981, as cited in Medley, 1976: 45) have found that family relations is an important thing that can well stimulate older adults to have social relationship with others. A study of Medley (Medley, 1976: 54) also found that satisfaction in family is an important impact inducing satisfaction with own life of older adults.

In Thailand, Pramote Wangsaad (B.E. 2530) studied factors that have relationships with mental health of older adults in the municipality of Kalasin Province using the sample of 261 older adults (age equal to or more than 60 years old). This

study found that family relation was a variable that had power to predict mental health of older adults with statistical significance ($b = 0.37, p < 0.05$). It meant that if older adults reside in a family with good relation, then they will also have good mental health. This result was consistent with that of the study of Mitree Tiyanatanakul (B.E. 2536) which investigated factors that have relationship with mental health of 234 older adults in Bangkok. This study discovered that family relations had a statistically significantly moderate relationship with mental health of older adults ($r = 0.57, p = 0.05$). This meant that older adults who have a good family relationship will have good mental health when compared to older adults who have a poor family relationship. Pornpaj Kingkaew (B.E. 2538) studied family elements that had relationship with mental health of 100 older adults in Changpurk Subdistrict, Mueng District, Chiangmai Province. Family elements included characteristic of family residence, family relation, and family role. The scores of these elements were compared with scores of mental health of older adults using the Mann-Whitney U Test. This study finding revealed that older adults who had better family relationship had better mental health than older adults who had poor family relationship with statistical significance ($z = -0.05, p < 0.001$).

From the review of related literature, it was found that family relation is associated with mental health of older adults. Older adults who have a good family relationship and receive love and support from their relatives will have increased ability to face the anxiety and have good mental health. Conversely, if older adults have poor family relationship, they will feel uneasy, worthless, and unhappy and would like to separate themselves from society. This relationship will induce emotion and behavior disorder and finally result in depression.

Relationship between family relations and depression in older adults

Family relations means love and familiarization within family members because family is the first society that we have. Thai society believes that family is one of the most important institutes whose function is to care for family members especially older adults. Good family relationship leads to happiness and satisfaction (Sukanya Rojprasert, B.E. 2541: 23) as well as good physical and mental health of older adults. At present, changes in society may make older adults not receive love,

and care, affection from their relatives. As for the new generations' gratefulness, respect, and value they have for older adults begin to reduce when compared to what it was like in the past. Some may even develop estranged relationships with older adults in their family. This problem can cause unhappiness, anxiety, distress, burdensome feeling, and lack of pride (Pornpaj Kingkaew, B.E. 2538: 2-3). This mental and emotional expression is one of the main reasons leading to depression in older adults.

Kanjana Fungpaisal (B.E.2539) studied factors related to depression of 330 older adults in Muang District, Kumpangpetch Province using TGDS, family relation assessment form, and health status assessment form developed by the researcher to collect data. In this research, family relation was defined as the role of older adults in the family and the interaction within family members and social support in the family. This study found that family relations had statistically significantly negative relationship with depression in older adults ($r = -0.46, p < 0.05$).

Pensri Linsuwanon (B.E. 2541) studied depression of older adults in Rongmueng Sub-district, Pratumwan, Bangkok Metropolis, using the sample of 350 older adults and using TGDS and family relation assessment form and health status assessment form developed by the researcher as data collection tools. In this research, the researcher defined family relations as the relationship within family members and which gave persons a feeling of stability, safety, and familiar. This study found that family relations had statistically significantly negative relationship with depression in older adults ($r = -0.58, p = 0.05$).

Kasem Lengwehastit et al (B.E.2540) examined the factors affecting depression in older adults in Mueng District, Kumpangpetch Province, using the sample of 398 older adults and using TGDS and family relation assessment form developed by the researcher as data collection tools. Family relations signified the supporter role of older adults in emotion, admiration, recognition of worthness, and sense of belonging in the family. This study found that family relation had statistically significantly negative relationship with depression in older adults at the 0.05 level.

From the review of literature and related research, it was discovered that family relations had a negative relationship with depression although different family relation assessment tools were used. Most of the family relation assessment tools were developed by the researchers, and then there may have differences in the content and

the definition of family relations. However, most of the definitions dealt with the role of older adults in the family and interaction between older adults and family members such as affection, mutual respect balance, sense of belonging in the family. In term of activities the older adults have with their family members such as spending time together with family members have not been studied. However, according to Morrow and Wilson (1961), this aspect is an important part in concept of family relation. Therefore, it is very interesting to include this aspect when explores about family relation in older adults. Therefore, family relation will be thoroughly studied and understood, especially in relation to depression in older adults.

Loneliness in older adults

Definition of loneliness

Loneliness is an emotional and mental condition that is difficult to clearly explain: Kasem Tantipalacheva and Kulaya Tantipalacheva (B.E.2528: 33) have defined loneliness as the expression of the mentality and emotional abnormality related to the stress of social.

According to Supanee Nantawichai (B.E.2534: 9), loneliness is mental distress originating from lack of meaningful relationship with others making people feel self-worthless, lack of love or care from others, alone, and have a preference to be isolated from others or society. In addition, Ryan & Patterson (1987: 7-8) stated that loneliness is a condition that is stimulated by disappearance such as spouse and friend disappearance, belonging disappearance.

Fromn-Reichmann (1959: 1-2) defines a loneliness as an emotional or mental problem that is explicitly expressed as feeling of being lonely, miserable, unhappy, unreasonably distressed, and having no energy for any activity or stopping doing any activity that is difficult to appropriately define.

In conclusion, in this study loneliness is mental distress originating from lack of meaningful relationship with others making older adults feel self-worthless, lack of love or care from others, alone, and have a preference to be isolated from others or society.

Loneliness was found in 12-40% of the older adults aged 65 years old and up (Creecy et al., 1985: 487). According to another study, almost 50% of the older adults

are facing loneliness (Siriboon, S., 1995 as cited in Taechamahachai, C., 1997: 94). It often occurs together with aging in older adults, especially in older adults who have poor physical and mental conditions (Cruz, 1986: 22).

Type of loneliness

Reisman (Reisman et al., 1961 as cited in Shultz, in Rawlins, et al. (Eds.), 1993: 434) has divided loneliness into three categories following:

1. Transient loneliness is of temporary duration: a few minutes or hours. It is not recognized as a problem that requires professional intervention. Clients either relieve their own loneliness by seeking the companionship, or the unpleasant feeling subsides with time.

2. Situation loneliness is triggered by specific life events. Common events that cause situational loneliness include moving, going away to college, divorce, death of a family member or friend, changing jobs, and losing friends who move away or withdraw their friendship. The reactions extend beyond just the feeling of being lonely. Additional reactions include headache, depression, sleep disturbances, anxiety, and physical complaints. Clients with situational loneliness are more likely to seek professional assistance than those who experience transient loneliness (possibly lasting up to one year).

3. Chronic loneliness is when loneliness lasts longer than two years, with no apparent traumatic event. Loneliness becomes a way of life. Even when social opportunities arise, established patterns prevent healthy interactions with others. Intimacy is minimal or nonexistent. Those who suffer from chronic loneliness tend to have only superficial relationships because of their difficulty in establishing intimate contact.

Weiss (Weiss, 1973 as cited in Lunt, 1991: 27) has divided loneliness into two categories as follows:

1. Emotional loneliness. This would be expressed in the feeling of anxiety, restlessness, and emptiness caused by lack of a close relationship because of the feeling of their physical unattractiveness.

2. Social loneliness. This would be expressed in the feeling of tiresome and the marginality society caused by lack of a meaningful relationship or lack of a sense of being a member of society.

In this study, the researcher looked at social loneliness as predictor of depression in older adults.

Causes of Loneliness

1. Physical alteration is physical deterioration of older adults because the function of the nervous system is delayed and eye vision and hearing become impaired, and this makes older adults unable to communicate with others. This result in mistranslation, distress, and feeling abandoned. In addition to this, older adults also have more sicknesses. For example older adults are not able to control urination, hence embarrassment when socializing. These can lead to oppression and separation from society. According Townsend (Townsend, 1968 as cited in Ryan & Pattersan, 1987: 9), older adults who have poor physical health may feel lonesome and change their lifestyle.

2. Mental and emotional alteration is an important factor causing loneliness in older adults because when the age increases, older adults have alteration in mental health and emotion such as obsession, incoherent thought, and easy distress because they think their off-springs do not recognize their importance. These opinions can induce frustration in older adults. Besides, Ryan and Pattersan (Ryan & Pattersan, 1987: 10) have found that death of a spouse and hopelessness are related to loneliness in older adults.

3. Social alteration occurs when older adults' role and status decrease. It is caused by changes in the Thai family structure that tends to become nuclear families. From these alterations, older adults are neglected and feel lonesome, worthless, and experience separation from society, resulting in depression in older adults.

Impact of loneliness

1. Mind: older adults experience worthlessness, hopelessness, and emptiness as if the were separated from society.

2. Behavior: older adults will separate themselves from society and may have problems related to drug addiction such as alcohol drinking, drug abuse, and use of sleeping pill. Older adults may spend time doing activities by themselves.

3. Opinion: older adults express this impact by blaming themselves, feeling reluctant, lacking self-confident and being self-obsessed.

Loneliness assessment

Assessment of loneliness of older adults is actually assessment of mental distress originating from disappearance of meaningful relationships that can bring about feeling lonesome, lacking dependable persons, feeling self-worthlessness, and lacking social acceptance.

From a review of literature, it has been found that loneliness in older adults is generally assessed with University of California, Los Angeles Loneliness Scale or UCLA Loneliness Scale which has been used with many samples such as undergraduate students, teenagers, nurses, teachers, and older adults. Content validity of this scale is 0.89 – 0.94, and in this study, the researcher used the Thai version UCLA Loneliness Scale as translated by Supanee Nantachai (B.E. 2534). Numerous research using abroad UCLA Loneliness Scale include Holmen et al.(1992) who studied loneliness of 1,725 older adults both male and female, residing in Stockholm who were older than 75 years old. This study found that lot of older adults who did not have any friend were lonely and the level of loneliness will dramatically increase. That was consistent with the study of Mullins, Tucker, Longio and Marshal (Mullins, Tucker, Longio & Marshal, 1989: 487-493) who studied loneliness of 2,731 Canadian older adults. The finding revealed that most of the lonely older adults were female and had low level of education.

In Thailand, Supanee Nantachai (B.E. 2534) studied relationship between loneliness and health status of 100 older adults who were 60-69 years old and found that alteration of the Thai family structure stimulated older adults to be away from their relatives and to be left alone more. Also, loss of their spouse and friends and loss of income could cause loneliness. Besides, loneliness had a statistically significantly negative relationship with health status ($r = -0.65$, $p = 0.001$). In addition, older adults who experienced loneliness and lack of adaptation would suffer from hopelessness and despair, as well as loss of appetite, which could lead to physical deterioration. This study was consistent with the study of Tida Meesiri (B.E. 2541) investigating loneliness of 109 older adults in slum areas in the municipality of Muang District, Surin Province. The findings revealed that 45% of older adults in slums had moderate loneliness, and personal factors of the subjects such marital status, type of residence and income were associated with loneliness. Besides, health status had a statistically

significantly negative relationship with loneliness ($r = -0.54$, $p = 0.01$). Finally Premruedee Sriram (B.E. 2539) studied the relationship between loneliness and adaptation of 250 older adults in Angthong Province and found that there was a statistically significantly negative relationship between loneliness and adaptation of older adults ($r = -0.50$, $p = 0.001$).

Then, it can be concluded that loneliness can be found in both male and female older adults, and it tends to increase in older adults. Loneliness has an effect on physical and mental health of older adults. In other words, when older adults have loneliness, then they will suffer from desperation, hopelessness, and lack of self-worth, all of which lead to depression in older adults.

Relationship between loneliness and depression in older adults

Older adults have to face with many alterations in their life e.g. mental and emotion alteration, especially loss of their spouse or friend, loss of their physical health, and loss of their roles. Such losses can result in the feeling of isolation, meaninglessness, and worthlessness, all of which are important causes of loneliness (Christ & Hohloch, 1988: 32). If older adults have to face with loneliness and do not have appropriate support, then they will feel disparate, hopeless, isolated from society, and depressed, finally leading to suicidal thoughts.

Breg et al. (1981: 342-349) studied loneliness in Swedish in older adults. They found that loneliness is a cause of depression. This finding was consistent with that of the study of Cruz (1986: 24-25) which discovered that loss of spouses can induce more sorrowfulness. When older adults can not solve this problem, then they will suffer from sadness, worthlessness, hopelessness, and depression and some persons may develop a suicidal thought. Besides, Prince (1997) studied lack of social support, loneliness, and event that is a risk factor of depression in older adults. They found that loneliness had a relationship with depression (odd ratio = 12), which was consistent with the finding of Keele-Card et al. (1993) who studied loneliness, depression, and social support of 30 COPD patients and their spouse and found that loneliness had a statistically significantly positive relationship with depression ($r = 0.62$, $p < 0.001$).

In Thailand, there is no research particularly studying the relationship between loneliness and depression in older adults. For this reason, the researcher was interested in studying the relationship between loneliness and depression in older adults because loneliness of older adults eventually leads to depression. Thus, the findings of this study can then be used as a guideline for healthcare teams to seek ways to assist older adults who suffer from loneliness and depression in older to minimize its effects and to help ensure quality of life of these older adults.

Summary of Literature Review

The purpose of this chapter was to review the available literature regarding the basic concept of older adults, depression in older adults, and factor related to depression in older adults including health status, family relations, and loneliness. It was found that most of the older adults have to face with various kinds of changes in their lives, impacting on their mental health. One of the most frequently found mental problems and is significantly important in older adults is depression. Several studies had been conducted to understand the development of depression in older adults, however the majority of them studied personal factors that have relationship with depression in older adults. There are many theories developed to explain the development of depression in older adults including biological, psychological, and social factors.

However, in current society, the psychosocial theory is interesting in term of helping understand depression in older adults. From the literature reviewed, it was found that the studies conducted based on psychosocial theory to understand depression in older adults in Thailand are limiting.

Therefore, the researcher is stimulated to do more research to expand knowledge on depression in older adults on a basis of psychosocial theory. The aim of this study was to examine the relationships of health status, family relations, and loneliness to depression in older adults and to determine the extent to which health, family relations and loneliness can jointly predict depression in older adults.

CHAPTER III

METERIALS AND METHODS

The study was a descriptive correlational study to investigate the relationship of health status, family relations, and loneliness to depression in older adults and to determine the predictive power of health status, family relations, and loneliness to depression in older adults.

Population and Sample

The population was the older adults who were 60 years old or older and who lived in Chainat Province.

Sample size

A sample size of the study was calculated based on power analysis of Cohen (1988) that determines the sample size following selected variables. With four independent variables (e.g., functional ability, the number of health problems, family relations, and loneliness) in multiple regression analysis, alpha of .05, a power of .80 and a medium effect size, a sample size of 84 subjects was required. However, to prevent the loss of subjects, the sample size of 100 was recruited. The inclusion criteria were

1. older male and female aged 60 years and older
2. not having cognitive impairment as screened by the Set Test; only the older adults who scored equal to or more than 25 were considered mentally normal and with no dementia
3. able to communicate in the Thai language.

The exclusion criteria were as follows:

- presence of an acute or current psychiatric problem that might interfere with memory or judgment

Setting

The target sample for this study was community-dwelling Thai older adults, age 60 or older, in Chainat Province. Four out of six districts and two sub-districts (Muang, Manorom, Watsingh, Supphaya) were selected as research setting for the recruitment of Thai older adults. The four districts were selected because the number of older adults is constantly increasing and the lifestyles of older adults and geography of these four districts are similar to other districts in Chainat province. In addition, the older adults in these locations remain in the agriculture lifestyle, similar to the predominant lifestyle of people in central region of Thailand.

Sampling

As for sample selection, the samples were selected using multi-stage sampling as follows: (see Figure 2)

Step 1: Four districts out of six districts and two sub-districts of Chainat Province were selected. These four districts were Muang, Manorom, Watsingh, and Supphaya.

Step 2: Sub districts were then selected using simple random sampling from the previously selected four districts (one sub districts from each district). The results were Nanglee, Hangnamsakorn, Nhongbua, and Banhadarsa.

Step 3: Villages were selected using simple random sampling from the previously selected sub districts (two villages from each sub districts). The results were Moo 2 and Moo 3 in Tambons Nanglee, Moo 4 and Moo 5 in Tambons Hangnamsakorn, Moo 1 and Moo 2 in Tambons Nhongbua, and Moo 2 and Moo 3 in Tambons Banhadarsa.

Step 4: Simple random sampling was used to select the older adults from the family folder who had the characteristics similar to the inclusion criteria (25 older adults from the villages in each sub districts).

In this study, in each village, the older adults were selected based primarily on age range (60 to 74, and 75 and older) because age range may affect health status which is the variable of interest in this study (Dunkle et al., 1994). It is expected that the ability to do daily activity would reduce when age increases. Additionally, only one older adult per family was recruited. If any family had more than one older adult, then cast lots was used (Polit & Hungler, 1999).



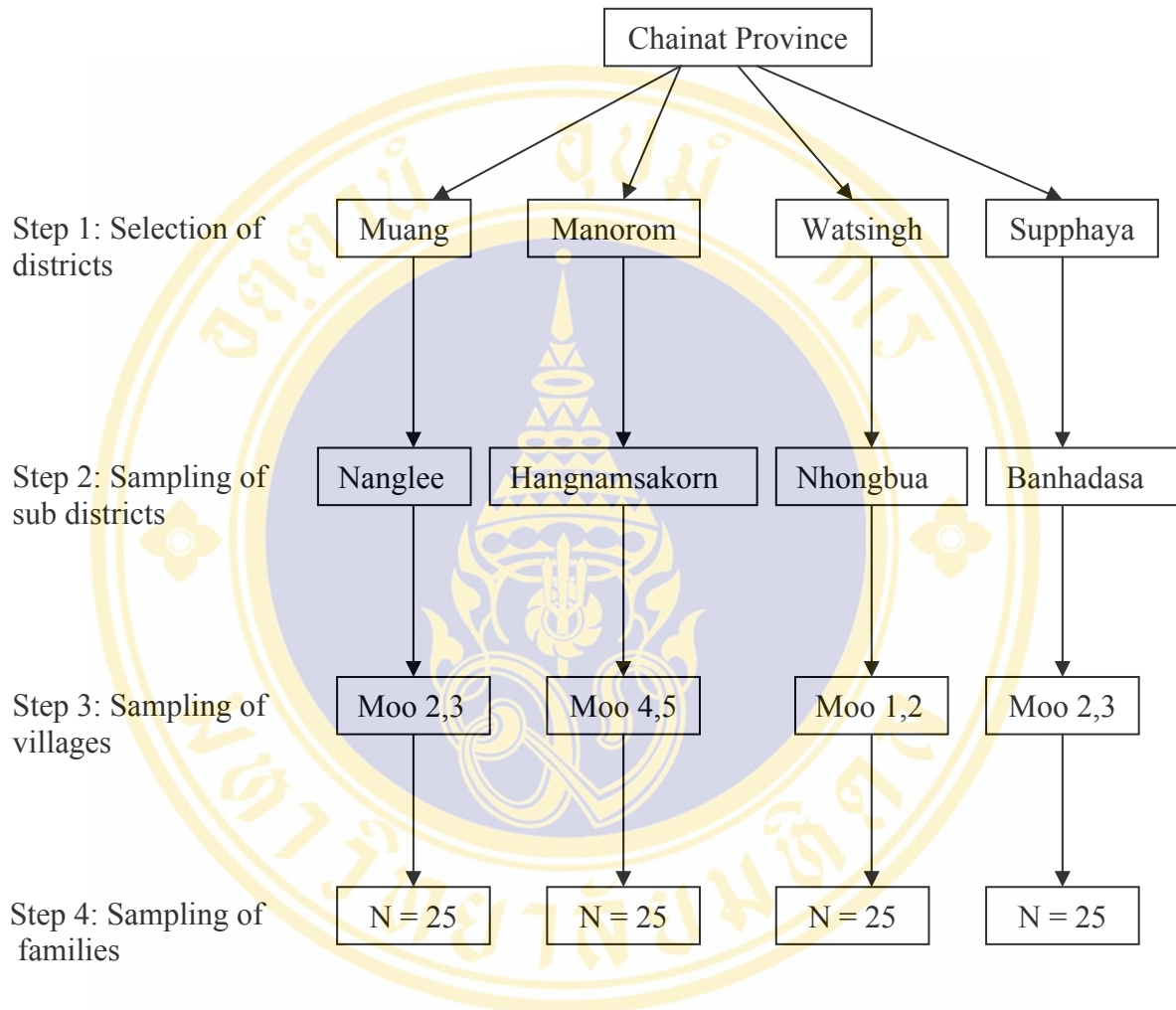


Figure 2: Sampling Procedure

Instruments

The instruments of this study consisted of five parts as follows:

1. Demographic data questionnaire (see Appendix C) The questionnaire was used to record information regarding the older adults characteristics including gender, age, marital status, education level, occupation, income per month, source of income, sufficiency of income, living situation, and other health problems.

2. The Set Test (see Appendix B) was developed by Isaacs and Akhtar (1972) and used to screen for mental abnormality in older adults. The test was performed by asking the older adults to name as many items as they could in each of the four categories or sets: colors, animals, fruits, and towns. One point was assigned for each correct item. No points were given or deducted if the items were repeated. The maximum score was 10 in each set, and the maximum total score was 40. Isaacs and Kennie (1973: 468) recommended that the older adults who are scored as equal to as or more than 25 were considered mentally normal and had no dementia.

Validity and reliability

Isaacs and Kennie (1973: 467-470) used this test in studying 189 persons aged 65 and older in the East End of Glasgow. The results showed that a total score under 15 corresponded closely to a clinical diagnosis of dementia. Scores between 15 and 24 reflected less similarity to dementia, while no subject with score of 25 or higher was found to be demented.

In Thailand, Arunee Nakaphong (B.E. 2539: 41-42) used the test to evaluate the mental status of the subjects in her study and found that administration time was generally two to three minutes, and it took no more than five minutes. Differences in education level, social status, and norm were not problematic in using the test. Further more, Nipa Niyomthai (B.E. 2542) used the test to screen the mental status of older adults and found that the majority of the older adults took the average of four minutes, ranging from 1.30 to 6.30 minutes.

In this study, the researcher used the Set Test in screening the older adults' mental status because the procedure was simple. It took a short time to complete, and it had very few limitations. The subjects who had scores of the Set Test less than 25 were excluded. When using the Set Test, the older adults took two to ten minutes to

complete it. It was found that the category of towns took the longest time for the older adults to recall.

3. The Health Status Assessment form In this study, health status comprised functional ability and the number of health problems as follows:

3.1 **The functional ability** was the composite scores on the Modified Barthel ADL Index and the Chula ADL Index:

The Barthel ADL Index (BAI) (see Appendix D) was used for measuring the functional status. The instrument developed by Mahoney and Barthel (1965). In Thailand, the Barthel Index (Thai version) was modified by Sutthichai Jitapunkul et al. (B.E. 2537). The questions of the Modified Activities of Daily Living Index (MBAI) covered feeding, transferring, moving (walking), dressing, bathing, grooming (brushing teeth, combing hair, shaving, and applying make up), toilet use, climbing stairs, and bowel and bladder control, which are the basic activities of daily living. The possible scores ranged from 0 to 20, with detail of each item as follows:

The activities of transferring and moving (walking) were scored on four levels (0 = independent; 1 = required more assistance; 2 = required less assistance; and 3 = completely dependent).

The activities of feeding, toilet use, dressing, climbing stairs, and bowel and bladder control were scored on three levels (0 = independent; 1 = required some assistance; and 2 = completely dependent).

The activities of grooming (brushing teeth, combing hair, shaving, and applying make up) and bathing were scored on two levels (0 = independent, 1 = dependent).

The scores were rated in three levels (Jitapunkul, S. and colleagues, B.E. 2537) as follows:

Total scores of	0-8	meant	older adults had poor activities of daily living
Total scores of	9-11	meant	older adults had moderate activities of daily living;
Total scores of	12-20	meant	older adults had good activities of daily living.

Validity and reliability

Sutthichai Jitapunkul et al. (B.E. 2537) tested concurrent validity of the instrument in 703 elderly people, aged between 60 and 90 years, living in Klong Toey District in Bangkok. Correlation coefficients of the BAI score with the Office of Population Consuses and Surveys (OPCS) disability score was moderate ($r = .50$, $p < .001$). Shah et. al (1989: 703-709) also used the modified Barthel ADL index to study 258 stoke patients. The Cronbach's alpha coefficient of reliability was .92.

In Thailand, Poonsri Pansrimongkorn and Tipa Torsakulkrew (B.E. 2535) used the modified Barthel ADL index to study in the out patients department for elderly, while Sutthichai Jitapunkul et al. (B.E. 2537) used the instrument with the elderly living in a community. Moreover, Cronbach's alpha coefficient of reliability was equal to .79 in the former study and .93 in the latter study. Chavalee Yamvong (B.E. 2535) and Suwane Mahakayanan (B.E. 2538) used the instrument with elderly patients and found that the Cronbach's alpha coefficients of reliability were .93 and .95, respectively.

The Chula Activities of Daily Living Index (CAI) (see Appendix E) was used to evaluate the ability to perform more complex tasks necessary for independent living. The instrument was developed by Sutthichai Jitapunkul et al. (B.E. 2537). The questions of CAI included walking outdoors, using public transportation, cooking, handling money, and doing heavy housework. The result scales for each item of CAI were not identical. Possible scores on the CAI ranged from 0 to 9. Higher scores indicated the participants' independence in performing activities of daily living and vice versa.

3.2 The Health Problems Interview Form (see Appendix C) was developed by the researcher to elicit information including type of health problems, diseases, or impairments that the older adults identified. The characteristic of the health problems interview form was a self-reported checklist.

4. The Family Relationship Scale (see Appendix F) was used to measure family relations. The instrument was developed by Pounpaka Churnsangnet (B.E. 2538) based on conceptual framework of Friedman (1986) and Morrow & Wilson

(1961). In this study, the family relationship scale was used because it examined about feeling and opinion of older adults toward family relations as follows:

1. Love and care
2. Interaction among family members
3. Respect among family members
4. Unity among family members
5. Relaxation among family members

It consisted of 15 items, and the total score was 45. The questions were composed of 12 positive items and 3 negative items. Each item was a 3-point rating scale as follows:

No meant the statement did not represent older adults' feelings or opinions.

Not sure meant the statement partly represented older adults' feelings or opinions.

Yes meant the statement mostly represented older adults' feelings or opinions.

There were both positive and negative statements. The scoring criteria were as follows:

	Positive statement (Items 1-4, 6, 8-11, 13-15)	Negative statement (Items 5, 7, and 12)
No	1	3
Not sure	2	2
Yes	3	1

The total scores were further categorized into three levels (Bloom as cited in Churnsangnet, P., B. E. 2538) as follows:

Scores lower than 60%	meant	poor family relations
Scores between 60 and 80%	meant	moderate family relations
Scores higher than 80%	meant	good family relations

Validity and reliability

This instrument was used by Poungpaka Churnsangnet (B.E. 2538) who had it checked for relevance and coverage of the content by four experts. When using the instrument with 30 older adults, the Cronbach’s alpha Coefficient was .87.

In this study, the instrument was examined to ensure its clarity, readability, and language appropriateness. As for its reliability, it was tested with 30 older adults whose characteristics were similar to those of the sample, and the reliability of Cronbach’s alpha Coefficient was .83.

5. The Loneliness scale (Thai version) (see Appendix G) was used to assess the feeling and opinions of the older adults toward their friends at present and about their relationship with their friends. The instrument was translated from the original designed by the University of California, Los Angeles Loneliness scale (UCLA Loneliness Scale) to Thai by Supunnee Nantachai (B.E. 2534). It consisted of 20 items, and the possible total scores ranged from 20 to 80. The questions were composed of 10 positive items and 10 negative items. The higher scores mean higher level of loneliness. The responses were arranged in the form of four level rating scales as follows:

Level of feeling	Positive questions	Negative questions
	(Items 1, 4-6, 9-10, 15-16, 19-20)	(Items 2-3, 7-8, 11-14, 17, 18)
	Score	Score
Often feel like that	1	4
Sometimes feel like that	2	3
Rarely feel like that	3	2
Never feel like that	4	1

The loneliness level was classified into three levels (Supunnee Nantachai B.E. 2534) as follows:

Scores of 61-80	meant	high level of loneliness
Scores of 41-60	meant	moderate level of loneliness
Scores of 20-40	meant	low level of loneliness

Validity and reliability

Russell et al. (1961) tested reliability of this instrument with the various samples (e.g., students, nurses, teachers, and older adults), and the Cronbach's alpha coefficients ranged from .89 and .94. In Thailand, the loneliness scale was tested for reliability with various groups of older adults, and the Alpha Cronbach Coefficient were between .81 and .86 (Supunnee Nantachai, B.E.2534; Premruedee Sriram, B.E. 2539; Thida Meesiri, B.E. 2541; Wanlapa Kositanan, B.E. 2542; Warisa Muttaya, B.E. 2543, and Kingkaew Sangsawang, B.E. 2545). The loneliness scale was employed in this study because it was suitable for assess the loneliness in older adults.

In this study, the loneliness scale was examined to confirm its clarity, readability, and language appropriateness. As for reliability, it was tested with 30 older adults whose characteristics were similar to those of the sample, and the reliability of Cronbach's alpha coefficient was .93.

6. The Thai Geriatric Depression Scale (see Appendix H) was used to assess depression in older adults. The instrumental was developed by Train the Brain Forum Committee. Train the Brain Forum Committee comprised of 29 experts from 14 institutes throughout Thailand (Nipon Phuagwarin and colleague, B.E. 2537: 3).

The TGDS comprised of 30 items, 10 of which were positive items (1, 5, 7, 9, 15, 19, 21, 27, 29, and 30) while the other 20 of which were negative items (2-4, 6, 8, 10-14, 16-18, 20, 22-26, and 28). The possible scores ranged from 0 to 30.

The answer "yes" to a positive item was given a score of 0, while the answer "no" was given a score of 1. In contrast, the answer "yes" to a negative item was given a score of 1, and while the answer "no" was given a score of 0.

The total TGDS scores were classified into four levels (Phuagwarin, N. and colleagues, B.E. 2537 as follows:

Scores of 0-12	meant	no depression.
Scores of 13-18	meant	mild depression.
Scores of 19-24	meant	moderate depression.
Scores of 25-30	meant	severe depression.

Validity and reliability

Nipon Phuagwarin et al. tested this instrument with 275 older adults (aged 60 to 70 years old) from 14 institutes all over Thailand. They found that the reliability was .93. Besides, Arunee Nakaphong (B.E. 2539) and Chadjen Jantarpat (B.E. 2543) tested this instrument with 131 older adults living in institution and 20 hospitalized patients, respectively, and the alpha correlation coefficient were .88 in the former study and .83 in the latter study. In this study, this instrument was used because it was reliable, easily understood, less time consuming and appropriate with the older adults and Thai culture.

In this study, the Thai Geriatric Depression Scale was examined to ensure clarity, readability, and language appropriateness. The instrument was tested for the reliability in 30 older adults whose characteristics were similar to those of the sample. The reliability of Cronbach's alpha Coefficient was .89.

Data Collection Procedure

The approval of the Ethical Clearance Committee on Human Rights Related to Research Involving Human Subject from the Faculty of Graduate Studies, Mahidol University was obtained before starting the procedure below. The data collection was proceeded in the following sequence:

1. An introductory letter from the Faculty of Graduate Studies, Mahidol University was sent to the Director of the Chainat Province Health Office to explain the objectives of this study and to ask for permission to collect data.
2. After permission was granted, the researcher contacted the key persons in each community, i.e. the director of community hospital, Head of health promotion department, and the directors of local health centers, to explain the objectives, procedures, and data collection process.
3. The researcher selected the older adult subjects by multi -stage sampling.
4. The researcher met community leaders and health care volunteers to ask for suggestion regarding how to approach older adults.
5. The researcher collected data from the sample as follows:

5.1 The researcher met the subjects and established the relationship by introducing self, describing the research objectives, and asking for participation in the study with protection of human subjects taken into account. When the subjects clearly understood the procedure, they were asked to sign the informed consent form or to express by verbal agreement. The researcher then asked for their readiness to answer to the instruments. If the subjects were not ready due to prior engagement, the researcher made an appointment with them for subsequent data collections.

5.2 When the subjects agreed to participate in the study, a one-time interview was conducted by the researcher at the subjects' convenience. The subjects responded to the questionnaires including the general information, health status, family relations, loneliness, and depression in older adults' questionnaires. As for the sequencing of the questionnaires, the researcher would carefully consider the details threatening the subjects' feelings so as to ensure that the subjects would feel as least threatened as possible. The whole data collection procedures lasted only about 45- 60 minutes for each subject.

5.3 After the subjects had completed all of the questionnaires, the researcher immediately reviewed the questionnaires for completeness and expressed gratitude to the subjects for their participation.

Protection of Human Subjects

The protection of human subjects in the study was properly carried out by seeking approval of the Ethics Clearance Committee on Human Rights Related to Research Involving Human Subject of Mahidol University. Before collecting the data, the researcher needed to obtain a verbal agreement or signed consent form indicating that the subjects clearly understood the objectives of the study, the data collection procedures, duration, and the right to participate or refuse to disclose information anytime during the completion of the questionnaires. The subjects were assured of confidentiality of their answers that only code numbers would be used on the questionnaires instead of names. All data were analyzed by the researcher and reported as group data.

Data Analysis

Data were analyzed by using the SPSS statistical package as follows:

1. Descriptive statistics (e.g., mean, standard deviation, and range) were performed to describe the demographic characteristics of the subjects and the major variables of the study.

2. Pearson's product-moment correlation was used to analyze the relationships of health status, family relations, and loneliness to depression in older adults. Criteria for interpretation correlation coefficient (Munro, 1997: 235) are presented as follows:

$\pm 0.70 - \pm 1$	high
$\pm 0.50 - \pm 0.69$	moderate
$\pm 0.00 - \pm 0.49$	low

3. Stepwise Multiple Regression was used to identify the predictive power of health status, family relations, and loneliness to predict depression in older adults.

The significance level of this study was defined at .05 before the data were analyzed to test the assumption of multiple regression.

CHAPTER IV

RESULTS

This study was a descriptive correlational study aimed at studying relationships of health status, family relations, and loneliness to depression in older adults. The results of this study are presented as follow.

Data Management

For this study, 110 older adults were approached for data collection. After performing the Set Test, 100 older adults passed set test and were included in the study. Before being analyzed, data were cleaned and checked for problems that needed to be addressed and managed. The results from histogram, box plots, and stem and leaf analysis showed the problem of outliers in four independent variables including functional ability, family relations and the number of health problems. According to the results, 4 participants were deleted and the total samples of 96 were used for data analysis.

Univariate analysis

Demographics of the Sample

The sample of this study consisted of 96 older adults with 56 females (58.3%) and 40 males (41.7%). The age range of the participants was 60 to 92 years old with the mean age of 73.89 (SD= 6.79) years old. The majority of the sample was married (44%), lived with their spouse and adult children (39.6%), finished primary school (76%), unemployed (59.4%), earned income lower than 2,000 bath per month (66.7%), received financial support from spouse and children (79.2%), and reported insufficient income (57.3%) (see Table 1).

Table 1 Demographic Characteristics of Participant (N = 96)

Characteristics	Number	Percent	Characteristics	Number	Percent
Gender			Occupation		
Male	40	41.7	Unemployed	57	59.4
Female	56	58.3	Employee	19	19.8
Age (years)			Agriculturist	18	18.7
60-69	25	26	Merchant	2	2.1
70-79	50	52.2	Income per month (Baht)		
80-89	20	20.8	< 2,000	64	66.7
> 90	1	1	2,001- 4,000	20	20.8
Marital status			4,001- 6,000	4	4.2
Married	49	51	> 6,000	8	8.3
Widowed/Divorced/ Separated	44	45.9	Source of income*		
Never married	3	3.1	Children/spouse	76	79.2
Educational level			Employed	39	40.6
No education	20	20.8	Rent	19	19.8
Primary school	73	76	Relief fund	6	6.3
Secondary school	2	2.1	Pension	3	3.1
Diploma	1	1.1	Relatives	2	2.1
Hobby *			Saving	2	2.1
Watching television	43	44.8	Sufficiency of income		
Listening to radio	36	37.5	Insufficient	55	57.3
Planting	34	35.4	Sufficient	41	42.7
Reading a book	28	29.2	Living arrangement		
Praying	7	7.2	Living alone	11	11.5
Breeding animals	6	6.3	Living only with spouse	13	13.5
Weeding out	5	4.2	Living with spouse/ adult children	38	39.6
Weaving a bamboo basket	2	2.1	Living with adult children	29	30.2
			Living with relatives	5	5.2

*could have more than one source

Descriptive Data on Major Study Variables

Major variables in this study included the number of health problems, functional ability, family relations, loneliness and depression. Descriptive statistics are presented in this section. Mean, standard deviation, range, kurtosis, and fisher’s skewness are shown in Table 2.

Table 2 Mean, Standard Deviation, and Range of Major Variables (N = 96)

Variable	Mean	SD	Possible range	Actual range	Kurtosis	Fisher's skewness
The number of health problems	3.90	2.37	0-10	0-10	-.33	2.24
Functional ability					-.10	-3.68
MBAI*	18.92	1.39	0-20	15-20		
CAI*	7.27	1.92	0-9	0-9		
Family relations	39.10	4.62	1-45	27-45	-.07	-3.25
Loneliness	46.64	10.70	20-80	23-70	-.62	0.48
Depression	14.82	6.70	0-30	2-27	-1.09	-1.88

Note MBAI*; The Modified Barthel ADL Index

CAI*; Chula Activities of Daily Living Index

Instrument Reliability

Cronbach's alpha coefficients were calculated to assess the internal consistency for the Family Relationship, the Loneliness, and the Thai Geriatric Depression Scale. Burn and Grove (1993) noted that reliability of .80 is considered the lowest acceptable coefficient for a well developed measurement tool. For a newly developed instrument, a reliability of .70 is considered acceptable. The reliability coefficients of the scale used in this study ranged from acceptable to high. The Family Relationship, the Loneliness, and the Thai Geriatric Depression Scale had high reliability coefficients: .80, .90, and .90 respectively (see Table 3).

Table 3 Cronbach's Alpha Coefficients of the Instruments Used in the Study (N = 96)

Instruments	Cronbach's alpha coefficients
Family relationship	.80
Loneliness	.90
Thai Geriatric Depression Scale	.90

Results by Research Question

Question 1: What are health status, family relations, loneliness, and depression level in older adults?

Health Status

The health status was reported in term of the number of health problems and functional ability.

The Number of health problems

The majority of the older adults had health problems (96.9%). Only three older adults (3.1%) reported no health problems. The number of health problems ranged from 0 to 10. (Mean = 3.9, SD =2.7) The most common health problems among the older adults were arthritis (67.7%), visual impairment (66.7%), constipation (36.5%), insomnia (33.3%), hypertension (33.3%), gastritis (28.1%), dizziness (25%), anorexia (13.5%), hemorrhoid (12.5%), and heart disease (11.5%) (see Table 4).

Table 4 Self- Reported Type of Health Problems and the Number of Health Problems of the Older Adults (N = 96)

Characteristics	Number	Percent
Health problems		
Yes	93	96.9
No	3	3.1
Type of health problem *		
Arthritis	65	67.7
Visual impairment	64	66.7
Constipation	35	36.5
Insomnia	32	33.3
Hypertension	32	33.3
Gastritis	27	28.1
Dizziness	24	25.0
Anorexia	13	13.5
Hemorrhoid	12	12.5
Heart disease	11	11.5
Hypotension	9	9.4
Diabetes	8	8.3
Asthma/ bronchitis	6	6.3
Fatigue	5	5.2
Numbness	5	5.2
Stress	5	5.2
Hearing deficit	4	4.2

Table 4. Self- Report Type of Health Problems and the Number of Health Problems of the Older Adults (N = 96) (cont.)

Characteristics	Number	Percent
Benign prostatic hypertrophy	3	3.2
Hypercholesterolemia	3	3.2
Paralysis	2	2.1
Chronic urinary tract infection	2	2.1
Others (skin disease, nephritis, anemia, pulmonary TB, hepatitis, gall stone)	6	6.3
A number of health problems		
0	3	3.1
1-2	31	32.3
3-4	25	26
5-6	23	24
7-8	10	10.4
9-10	4	4.2

*One participate might have more than one health problem.

Functional ability

The scores of functional ability was calculated by summing the score of MBAI and those on the CAI. The total scores of MBAI and CAI were 20, and 9, respectively. Therefore, the range of possible of functional ability is from 0 through 29. The findings showed the scores of MBAI ranged from 15 to 20 with a mean of 18.92 and standard deviation of 1.39. For CAI scores ranged from 0 to 9 with a mean of 7.27 and a standard deviation of 1.92, indicating that functional ability of the participants in performing basic activities of daily living and instrumental activities of daily living were very high, indicating the majority of the participants were independent in performing activities of daily living (see Table 5).

Table 5 Level of Functional Ability of the Older Adults (N = 96)

Score	Functional ability	Number	Percent	Mean	SD
MBAI				18.92	1.39
0-8	Poor	0	0	-	-
9-11	Moderate	0	0	-	-
12-20	Good	96	100	-	-
CAI	-	-	-	7.27	1.92

Level of family relations

The scores of family relations ranged from 27 to 45 with a mean of 39.08 and standard deviation of 4.61. The majority of the participants had a good level of family relations (78.1%) and 21.9% had a moderate level of family relations (see Table 6).

Table 6. Level of family relations of older adults (N = 96)

Score	Family relations	Number	Percent
>80%	Good family relations	75	78.1
60-80%	Moderate family relations	21	21.9
<60%	Poor family relations	0	0

Level of loneliness

The scores of loneliness ranged from 23 to 70 with a mean of 46.64 and standard deviation of 10.67. The majority of the participants had a moderate level of loneliness (55.2%), 33.3% had low level of loneliness, and 11.5 % had high level of loneliness (see Table 7).

Table 7 Level of loneliness of older adults (N = 96)

Score	Loneliness	Number	Percent
20-40	Low level of loneliness	32	33.3
41-60	Moderate level of loneliness	53	55.2
61-80	High level of loneliness	11	11.5

Level of depression

The scores of depression ranged from 2 to 27 with a mean of 14.82 and standard deviation of 6.65. The majority of the participants had moderate depression 37.5% and 1% had severe depression (see Table 8).

Table 8 Level of depression of older adults (N = 96)

Score	Depression	Number	Percent
0-12	No depression	34	35.5
13-18	Mild depression	25	26.0
19-24	Moderate depression	36	37.5
25-30	Severe depression	1	1.0

Results by Research Hypothesis

As explained previously in chapter 3, Pearson's product-Moment Correlation coefficient was used to answer hypothesis one to four and Multiple Regression was used to answer hypothesis five. Before multiple regression analysis was performed, the assumptions related to regression analysis were examined including:

1. Assumptions concerning about residual (e):

1.1 Normal distribution

"If the relationships are linear and the dependent variable is normally distributed for each value of the independent variable, then the distribution of the residuals should be approximately normal. This can be assessed by using a histogram of the standardized residuals" (Munro, 2001: 270). In this analysis, histogram showed the normal curve of the standardized residuals. On the total depression score, the residuals are fairly normal distributed. The regression variate is found to meet the assumption of normality (Figure 3, see Appendix F).

1.2 Homoscedasticity

Homoscedasticity was tested by plotting the residuals against the predicted values and against the independent variables. For the assumption to be supported, "when the standardized predictor values are plotted against observe value, the data would form a straight line from the lower-left corner to the upper- right corner" (Munro, 2001: 273). The plotted values fall close to the line in normal probability plot.

According to the testing, the data from the study fulfills this assumption (Figure 4, see Appendix F).

1.3 Autocorrelations

The autocorrelations was examined using Dubin- Watson Statistical testing. Thus, Dubin- Watson value approaching 2 indicated the independence between residuals (Kanlaya Vanichbuncha, B.E. 2546: 340). In this study, the regression model revealed Dubin- Watson test statistics of 2.095, indicating no autocorrelations problem.

2. Multicollinearity

To detect for multicollinearity, the correlation matrix was used to check for large correlation coefficients greater than .80 or .90 between independent variables (Munro, 1997). In addition, the tolerance diagnostic procedure was performed. Tolerance is “the proportion of the variance in an independent variable that is not accounted for by the other independent variable” (Munro, 1997: 268). Tolerance value of zero indicates perfect collinearity. In addition, the “variance inflation factors” (VIFs) was used to detect multicollinearity problem. The VIFs is the reciprocal of tolerance (Munro, 1997). A small value of VIFs indicates a smaller problem of collinearity. Stevens (1996) suggested that if the VIF exceeds 10, it should be a concern. In this analysis, no correlation coefficient between independent variables was greater than .80 or .90. Also, tolerance value of independent variables range from .50 to .70 and VIF values ranged from 1.415 to 1.697; therefore, multicollinearity among the predictors was not a problem for the study.

3. Cooks' distance and Mahalanobis distance

Cooks' distance and Mahalanobis distance are measures used to investigate the outlier problem for regression analysis. They revealed which cases are most influential in affecting the regression equation. The Cooks' distance less than 1 and Mahalanobis distance less than 10 determine that there is no outliers problem for regression. For this study, Cooks' distance ranged from .00-.05 and Mahalanobis ranged from .01-9.54, therefore, there was not outlier problem for this study, confirming that the data are appropriate for regression analysis.

In conclusion, there were no violations of assumptions for regression. Therefore, the data are appropriate for regression analysis.

Hypothesis 1 The number of health problems is positively related to depression in older adults.

The results from Pearson Product Moment Correlation showed that the number of health problems was moderately and positively correlated with depression ($r = .55$, $p < .01$).

Hypothesis 2 Functional ability is negatively related to depression in older adults.

The results from Pearson Product Moment Correlation showed that functional ability was weakly and negatively correlated with depression ($r = -.32$, $p < .01$).

Hypothesis 3 Family relations is negatively related to depression in older adults.

The results from Pearson Product Moment Correlation showed that family relations was moderately and negatively correlated with depression ($r = -.57$, $p < .01$).

Hypothesis 4 Loneliness is positively related to depression in older adults.

The results from Pearson Product Moment Correlation showed that loneliness was highly and positively correlated with depression ($r = .75$, $p < .01$) (see Table 9).

In conclusion, hypothesis 1, 2, 3 and 4 were supported.

Table 9 Correlation Matrix of the Number of Health Problems, Functional Ability, Family Relations, Loneliness, and Depression in Older Adults (N = 96)

Variables	1	2	3	4	5
1. Number of health problems	1				
2. Functional ability	-.26*	1			
3. Family relations	-.40**	.12	1		
4. Loneliness	.52**	-.44**	-.55**	1	
5. Depression	.55**	-.32**	-.57**	.75**	1

* $p < .05$ ** $p < .01$

Hypothesis 5 Health status (The number of health problems, Functional ability), family relations, and loneliness can jointly predict the depression in older adults.

Stepwise multiple regression was used to answer this hypothesis. Three steps were performed.

In step 1: Loneliness was selected as the first predictor into the equation due to its great correlation with depression in older adults. Results showed that loneliness alone accounted for 56% of the variance in depression in older adults ($p < .001$).

In step 2: The predictor added to the equation was family relations. It was found that family relations accounted for an additional 4% of the variance. Therefore, loneliness and family relations can explain 60% of the variance in depression in older adults ($p < .001$).

In step 3: The predictor added to the equation was number of health problems. It was found that number of health problems accounted for an additional 2% of the variance. Results showed that loneliness, family relations and number of health problems all together can explain 62% of the variance in depression in older adults ($p < .001$). Functional ability was not selected into equation. Therefore, from the Stepwise multiple regression, loneliness, family relations and the number of health problems provided the best prediction of depression in older adults and could explain 62% of the variance in depression in older adults ($F = 50.87, p < .001$). In addition, loneliness emerged as the strongest predictor followed by family relations, and the number of health problems ($\beta = .54, -.20, .19$, respectively, $p < .001, p < .05, p < .05$, respectively). The functional ability did not emerge as a predictor of depression in older adults. The predictive equations were as follow (see Table 10).

Standard Score Equations to predict depression in older adults

Depression = .54 Loneliness - .20 Family relations + .19 The number of health problems

Table 10 Prediction of Depression in Older Adults (N = 96)

Steps	Variables	B	R ²	R ² change	F change	β	t
1	constant	-7.0					
	Loneliness		.56	.56	119.77	.75	10.94***
2	constant	9.90					
	Loneliness		.60	.56	8.84	.62	7.92***
	Family relations			.04		-.23	-2.97**
3	constant	8.53					
	Loneliness		.62	.56	6.22	.54	6.46***
	Family relations			.04	-.20	-.20	-2.63*
	The number of health problems			.02		.19	2.49*
Constant (a) = 8.53, R ² = .62, Overall F = 50.87							

*p< .05 **p<.01 ***p<.001

CHAPTER V

DISCUSSION

The discussion of the research results is presented in the following order: 1) demographic characteristics of the sample, 2) health status (the number of health problems and functional ability), 3) family relations, 4) loneliness, 5) depression, and 6) the relationships of health status, family relations, and loneliness to depression in older adults.

Characteristics of the Sample

The sample consisted of 96 older adults. Most of the subjects were female (58.3%) ranging in age from 60 to 92 years with a mean age of 78.89. These findings are consistent with the population structure of older adults in Thailand, where there were more female older adults than male (Siripanich, B., 1999; Jitapankul, S., 1999). To set the age intervals for the older adults, criteria according to their sociopsychobiological characteristics were employed (Craig, 1991; Hoffman, 1988 cited by Kaewkangwal, S.). Fifty two percent of the subjects were categorized into the middle-old age group of 70-79 years, 26% were in the young-old group of 60-69 years, and 21.8% were older than 80 years of age. The finding revealed that the older adults exhibited a trend of living longer. Most of the subjects (51%) were married and stayed with their spouses, adult children, and relatives (75%), which reflect the characteristics of families in Thai rural areas as well as extended families, because family members who got married continued to live with their families. For the educational level, 76% of the sample graduated from primary school. The study of the National Statistical Office (NSO) (2000) also revealed that most older adults had primary educational level. For occupation, 59.4% of the subjects were unemployed because of the social norm that older adults should rest, stay at home, and it was the time for the adult children to take care of their parents. For most (79.2%), the income came from their adult children. The majority (66.7%) claimed to have rather low

incomes, of less than 2,000 Baht/month. This is similar to the mean income (< 2,000 Baht/month) of older adults in the Central region (National Statistical Office, 2000). For income sufficiency, 57.3% of the older adults reported insufficient income for necessary expenses. The result reflects the economic status of subjects in rural areas, which is poor.

The general characteristics of the subjects are common with those of rural Thai older adults, particularly population structure, living characters and lifestyles.

Health Status

The numbers of health problems

Most of the subjects (96.9%) had health problems. Of the older adults, 32.3% had 1-2 health problems, and 4.2% had 9-10 health problems. According to the research result, health problems would occur among older adults and the numbers of health problems would increase because of physical degeneration with age. This affected physical functioning and decreased immunity, so that older adults got sick more easily. This is consistent with the studies of Siripanich, B., et al. (1989) and Chayowan, N., et al. (1989), that older adults (age > 65 years) would have one or more illnesses, but if the age was older than 80 years, they would have at least 3 chronic illnesses. In addition, biological theory explains the mechanisms of the physical changes in older adults that decreased efficiency of organ function caused distinct physical changes in older adults, and one obvious effect on older adults was health problems (Booncharoen, V., 1990; Janeoprom, S., 1991; Teuanwong, V., 1997).

From this study, most of the subjects (67.7%) had skeletal and joint problems, which were also found to be the most common problems among Thai older adults. This is consistent with several research studies (Churphawan, C., et al., 1997; Intornkosate, P., 1998; Wonglam, S., 1999; Seubwonglee, C., 2001; Na Nakorn, B., 2002). These common health problems may be related to their previous careers, which were agriculturalists and employees who needed to bend frequently and lift their bodies with heavy work and inappropriate body positions, from youth until old age. Regular activities, such as sitting on the heels, sitting cross-legged or climbing up and down stairs also generate pathology of the bones and joints. Degeneration of the skeleton and joints in relation to increasing age can create joint stiffness, arthritis and

joint pain (Eliopoulos, 2001). Furthermore, the findings from this study demonstrated other chronic health problems in older adults, such as hypertension and diabetes mellitus.

From the information available, it may be concluded that the various health problems of older adults are most likely to derive from physical degeneration. The health problems most found in older adults include difficulty in sleeping, dizziness, and constipation, and the chronic illnesses including hypertension and diabetes mellitus. These illnesses affect their daily living and physical function, which make older adults concerned more about their health. Consequently, caregivers and healthcare staffs should recognize and pay more attention to health problems in older adults because they can have an impact on older adults' psychological well being.

Functional ability

In this study, the assessment tool used to evaluate basic activities of daily living was the Modified Barthel ADL Index (MBAI) and the Chula Activities of Daily Living Index (CAI) was another assessment tool used to evaluate complicated activities of daily living. In this study, most subjects could do their basic activities of daily living independently. The findings showed that the majority of older adults were capable of doing daily routine work. This result may be related to that the majority of older adults in the study were in young- and-moderate old age, at 26% and 52.1% respectively, with less physical degeneration. This is consistent with several previous research studies (Vitayachotkittikul, N., 1991; Chunate, M., 1995; Fungpaisal, K., 1996), which found that older adults in young and moderate old age reported that they had perfect health, with a high ability for doing daily routine work. The basic daily work that older adults could do independently included washing the face, brushing teeth, eating, etc. The MBAI focused on the activities necessary for daily life, and if older adults were capable of doing them, they would try to help themselves. Although the findings showed that the majority of older adults had skeletal and joint problems, they did not seem to impact on the ability of older adults to perform basic activities of daily living.

In terms of complicated activities of daily living, the findings revealed that older adults had problems performing complicated activities of daily living, such as of

using public transportation, doing housework, doing laundry, ironing, and preparing food. The older adults had to depend on other people for these activities. In order to perform these activities, the older adults needed physical strength, good eyesight, neurological sensitivity, and good body balance, which have been considerably deteriorate overtime. Another issue emerged from this study was that some older adults reported that they had no chance to perform these complicated activities of daily living, even though they were capable of doing so, because their adult children did not allow them to do them. The results implied that the social system, the family, and tradition seem to prevent older adults from performing their abilities, leading them to be in the dependent status even if they were healthy, which in turn can impact their psychological well being.

Having the capability to perform the basic and complicated activities of daily living independently gives older adults pride in themselves and high self-esteem. On the other hand, dependence on other people to do activities of daily living can make older adults suffer from inferiority, low self esteem and feeling different from others, promoting negative feeling and leading to depression.

Family Relations

The results revealed that most of the subjects (78.1%) had good family relations, meaning that the perceptions of the older adults regarding any actions of family members involving caring, respecting, attention, assistance and spending quality time together were at a good level. Findings were consistent with the studies of Kingkaew, P. (1995) and Leelawong, S. (1998), studied family relations of 100, 330 older adults in Chiang Mai province and Nakornrajsima province, respectively, which found that the older adults had good family relations. Furthermore, research on the socioeconomic effects of the older adult population in Thailand, conducted by the Population Research Institute, Chulalongkorn University (1989), indicated that most of older adults had no family problems. The research finding stated that even though the socioeconomic status had changed, the social values of Thai society regarding respectfulness toward older adults slightly changed. Although the older adults were not heads of the family, family members always gave them respect and asked them for their opinions, which made them proud and clearly recognize their value (Morrow &

Wilson, 1961 cited by Rojprasert, S., 1998). For the aforementioned reasons, the older adults had no family problems and good family relations.

However, 21.9% of older adults reported to have the moderate level of good family relations. The finding implied that these older adults perceived inadequate love, care, respect, feeling significance and support from family members. From the evaluation of family relations, older adults felt that they had insufficient care from their families, because they had fewer opportunities to talk with family members. Most family members worked for a living and had to leave the house in the morning and return after dark. The situation seemed to be personal. It was difficult to find an opportunity to talk or share opinions. They sometimes had the opportunity to talk but could not keep the conversation going very long because of different opinions. These kinds of actions by family members made the older adults distress.

In addition, social changes affected the roles of the older adults in family. In the past, older adults were responsible for the family livelihood or were heads of the family, but they were now dependent, which might make them feel that their family members perceived them as worthless. They felt loss of relationship, role and power in the family. Perceiving negative family relations by older adults affected their psychological status, causing them feeling discomfort, anxiety, distress, and being a burden and unimportance. The finding from this study strengthened the important of family relations in older adult and was consistent with the study of Boonyanupong, K., et al. (1990), which found that the major factor affecting the psychological status of older adults was good relationships with family members.

The results from the study suggested the significant role of the family relations for older adults' psychological status. The findings stressed the desire of older adults for love, attention, respect, and acceptance from their family members. Even if social changes occur, family still plays a significant role in caring for, giving love, and making older adults happy. On the other hand, if a family is not aware of good relationship with an older adult by not giving them love and respect, it will significantly affect the psychological status of the older adults. Hence, the culture of having a sense of obligation to elders among family member should not be ignored but be continued.

Loneliness

The study results revealed that the majority of older adult subjects experienced loneliness. Most of them (55.2%) reported that their loneliness were at a moderate level. The percentage of older adults with low level of loneliness was 33.3%, while 11.5% of the subjects reported high level of loneliness. This finding suggested that loneliness is an important problem in older adults. The result was consistent with previous local and international research (Nanthachai, S., 1991; Sriram, P., 1996; Sangsawang, K., 2002; Berg, et al., 1981; Creecy, et al., 1985), which showed that older adults were most prone to experience loneliness. In the current study, the subjects felt lonely because the older adults had nobody with whom to share their opinions, or no spouse, children or close friends. In addition, they did not get enough attention from anyone. In current society, there are high levels of competition to increase the financial security of the family. Hence, family members of working age had to work outside the house and leave the elders at home. In the interviews, older adults reported that staying at home alone was boring because they had no opportunities to meet anyone else. The lack of social participation made them feel more bored and lonely, while sharing activities with others made the older adults happy, which is consistent with activity theory stating that sharing activities gives older adults both physical and psychological pleasure (Kaewkangwal, S., 2002).

Results from this study implied that loneliness may affect the psychological status of older adults, generating distress and depression. Therefore, results from the study suggested that caregivers and healthcare staff should comprehend and be aware of the related factors to loneliness among older adults. Ignorance toward older adults can turn moderate and low levels of loneliness into a high level of loneliness, which causes various psychological problems among older adults.

Depression

As the research results indicated, more than half of the subjects (64.5%) had depression. The degrees of depression are as follows: 26% were in mild, 37.5% were in moderate, and 1.0% were in high level of depression. The incidence of depression in this study was quite different from previous local and overseas research (Thavichart, N., 1990; Chareonkhum, S., 1992; Chanpat, C., 2000; Berkman, et al.,

1986), which reported percentage of depression in older adults varied from 84.8 to 67.4, to 61.7, and to 16.4, respectively. The difference of depression of older adults may come from the ways studies had been conducted such as differences in the age groupings, assessment tools and living conditions of the older adults in each study. However, while the rates of depression were different in each study, the research findings demonstrated that depression, a psychological problem, was frequently found in older adults. Hence, this indicated the growing trend of older adults with depression.

In this study, 64.5% of older adults suffered from depression. Most of them were in moderate level of depression. According the findings, older adults from this study lived in rural community with various problems, particularly financial problems, which were very important to them. Most of the older adults (57.3%) reported that they have had insufficient income. They normally had a mean income less than 2,000 Baht per month. They had to keep some money for their private matters and family expenses, such as food, electricity, and water bills. The increased expenses of older adults who already had small incomes generated anxiety, discomfort, and discouragement leading to depression. Tapmanee (1997) also stated that older adults who were satisfied with their incomes experienced less depression than those who were dissatisfied.

Besides economic problems, the subjects expressed a lack of community relationships, which might be responsible for depression. Physical, psychological, and social conditions prevented older adults from working outside. Most of them had to stay at home. From the data collected, older adults stayed home alone and took care of the grandsons/granddaughters, making them to have no opportunity to meet anyone so lacking of social contact. Older adults' lifestyles affected their psychological status, such as being bored, having low self-esteem, having no role in the family, inducing negative self-attitudes, and eventually resulting in depression. Fungpaisal, K. (1996) stated that older adults with less social participation would have more depression than those with more social participation. Heamthorn (1989) showed that older adults with good social contact would have good psychological health, because social activities offered them satisfaction in their lives. They also had opportunities to meet friends of the same age. They received encouragement, and consulted and shared opinions with

their friends, which enabled them to sustain a broad vision, with less risk of depression.

As the research results showed, depression in older adults derived from several factors, when changes happened to the older adults that had major impacts on their lifestyles. From the incidence of depression among older adults, an increasing trend may be predicted. Consequently, healthcare staff should pay more attention to this psychological problem and apply appropriate care for older adults with depression.

Relationship of Health Status, Family Relations, and Loneliness to Depression in Older Adults

Hypothesis 1 The number of health problems is positively related to depression in older adults.

From this study, the number of health problems showed a positive correlation with depression. Older adults with many health problems will have higher degrees of depression, which supports Hypothesis 1. From the literature review, none of research study looked at number of health problems with depression. Therefore, results from this study enhanced knowledge on impact of physiological deterioration on depression. Berkman, et al. (1986) and Fungpaisal, K. (1996) showed that, among older adults, having previous illnesses or chronic diseases was related to depression. The studies of Thavichart, N. (1991) and Wangsaart, P. (1988) revealed that dissatisfaction with both physical and psychological health status had a positive correlation with depression. In the current study, the number of health problems was positively correlated with depression. The findings may be explained that the perception of older adults of having several existing health problems and physical degeneration may affect their psychological status, leading to depression. In addition, having many health problems may decrease self-esteem and create negative attitudes in older adults. Furthermore, they might feel insecure and lose their confidence in their health. Older adults with several health problems may be more likely to deal with unpleasant experiences regarding their treatments and environment. Having several health problems also affect their lifestyles and their families. Their illnesses made them dependent on their significant others for both self-care and expenses, which increases anxiety and stress in older adults. Prolonged unsolved stress and

anxiety affect the psychological health of older adults, leading to depression. Leakoff, et al. (1987) also reported that perceived poor health status in older adults correlated with depression.

These research results indicate that caregivers and healthcare staff should be aware of depression in older adults derived from physical degeneration of various systems that transform into illnesses, especially for older adults with several health problems. Consequently, caregivers and healthcare staff should not neglect, and should give significance to health assessment for older adults, because they will create better understanding of the existence of depression in older adults.

Hypothesis 2 Functional ability is negatively related to depression in older adults.

From this study, the functional ability, summing scores of the MBAI and CAI, had negative correlations with depression, supporting hypothesis 2. The results indicated that older adults who have low functional ability will have high level of depression. This research result was consistent with previous research (Vachiratrakulthavorn, S., 2002 & Nakapong, A., 1996), which showed that the functional ability of older adults who had had cardiac operations and were in the community was negatively correlated with depression. Loss of functional ability caused the older adults to become dissatisfied and lose their pride, and those feelings affected their self-concept and self-esteem. Negative attitudes mostly generated psychological problems, particularly depression. Evans (1982 as cited in Alexopoulos, G.S., et al., 1988) stated that depression developed from the response to physical functional losses, especially in people who had rapid physical changes with no time for acceptance, such as disabilities.

According to findings, all older adults were able to perform the basic activities of daily living (MBAI), while for complicated activities of daily living, only some of them can perform these kinds of activities. Since functional ability was the summing score of MBAI and CAI and all older adults were able to perform the basic activities of daily living (MBAI), it seemed that the relationship between functional ability and depression in older adults varied according to the abilities of older adults to perform complicated activities of daily living, such as using public transportation, and

preparing for food. As explained previously, inability to perform complicated activities of daily living led the older adults to be dependent on other people for their living, making them feel being a burden, different from other, inferior, low self-esteem, worthless, eventually leading to depression.

Consequently, to prevent depression in older adults, caregivers and healthcare staff should pay more attention to functional ability of older adults. Family and health care staff should promote self-care activities for older adults; allow them to perform activities by themselves. These care can at least increase older adults' self-esteem and pride. In addition, when performing the complicated activities, caregivers should provide close care, assistance, and encouragement to older adults.

Hypothesis 3 Family relations is negatively related to depression in older adults.

In this study, family relations had a negative correlation with depression. The finding indicated that older adults with poor family relations will have high levels of depression, supporting hypothesis 3. This research result was consistent with the previous research of Fungpaisal, K. (1996) and Sukatungka, K., et al. (1999), which showed that family relations had a negative correlation with depression among older adults in both rural and urban areas. Results from this study strengthened the important role of family relations on depression in older adults. Also the findings stressed the desire of older adults for love, attention, respect, and acceptance from their family members. Feeling of being loved, respected, needed, important is valuable for elders since these feelings can motivate older adults to have pleasant life and also can encourage them to have higher self-esteem and feeling of worth for others, especially their families. These feelings also create emotional security, resulting in good psychological health and less risk of depression.

Hence, family relationships are very important, and family members should comprehend that because it can create depression in older adults.

Hypothesis 4 Loneliness is positively related to depression in older adults.

The finding showed that loneliness had a positive correlation with depression, meaning that older adults with high levels of loneliness will have high degrees of depression. Therefore, hypothesis 4 was supported. Finding was consistent with the

research of Keele-Card, et al. (1993) and Breg, et al. (1981) on loneliness and depression in both male and female older adults. In addition, the findings strengthened the important role of loneliness on depression in older adults. Loneliness in older adults can be induced by loss of love's one such as spouse or friends, loss of social roles, and loss of social contact. In addition, unable to adapt to lifestyle changes as growing older can also be responsible for feeling of loneliness in older adults (Meesiri, T., 1998). Loneliness resulting from feeling loss can lead to feeling of hopelessness and lack of pride since older adults think that they are worthless and unaccepted in society (Nantchai, S., 1991). In addition, the lack of social contact with friends in the same age group, and limited mobility made the older adults feel lonely and experience negative attitudes towards themselves. Shultz, G. M. (1993: 432-450) expressed the view that those feelings increased the risk of older adults experiencing loneliness most. It seems that they live day-by-day without any value or motivation, discouraged, hopeless and lonely. Lonely older adults may become discouraged and fall finally into depression.

The findings suggested that to prevent depression in older adults, caregivers and healthcare staff need to pay more attention to their feeling of loneliness. Since the study showed that loneliness in older adults significantly affected their psychological health, and especially depression. Hence, healthcare staff should stress the psychological assessment of older adults by assessing their depression and loneliness statuses. These assessments help healthcare staff recognize that older adults who have high level of loneliness may prone to have depression and then can provide appropriate treatment to older adults on time.

Hypothesis 5 Health status (the number of health problems, functional ability), family relations and loneliness can jointly predict depression in older adults.

According to multiple regression analysis, the number of health problems, family relationships, and loneliness were found to be predictors of depression in older adults and they can explain 62% of the variance in depression in older adults. However, functional ability was not emerged as a predictor of depression in older adults. Therefore, hypothesis 5 was partially supported.

Loneliness was found to be the strongest predictor of depression in older adults ($\beta = .54$) and loneliness alone can explain 56% of the variance in depression in older adults. Finding revealed that loneliness is a very important predictor of depression in older adults. Feeling of loneliness made older adults feel distresses, hopeless, worthless, discouraged, empty, and alone in society. Lifestyle changes, e.g. behavioral, cognitive and physical changes, forced older adults to be isolated, blame themselves, become bored and fatigued. These behavioral cycles institute depression in older adults. Hence, caregivers and healthcare staff should not ignore and should place importance on feeling of loneliness in older adults. Paying attention to loneliness can prevent the onset of depression in older adults.

Family relations was found to be the second important predictor of depression in older adults, which could increase the variance in depression in older adults by 4%. The result indicated that family relation is an important factors that health care professional needs to be aware when taking care of older adults. The concern of older adults about family relationships is a major issue and it affects the psychological health of older adults. Hence, family members should pay attention to this issue and should continuously promote family relations, because they play a significant role in preventing depression in older adults.

The smallest extent predictor of depression in older adults was the number of health problems, which could increase the variance in depression in older adults by 2%. The findings may be explained that the perception of older adults of having several existing health problems and physical degeneration may affect their psychological status, leading to depression. In addition, having many health problems may decrease self-esteem and create negative attitudes in older adults. Furthermore, they might feel insecure and lose their confidence in their health. Older adults with several health problems may be more likely to deal with unpleasant experiences regarding their treatments and environment. Having several health problems also affect their lifestyle and their families. Their illnesses made them dependent on their significant others for both self-care and expenses, which increases anxiety and stress in older adults. Prolonged unsolved stress and anxiety affect the psychological health of older adults, leading to depression. These research results indicated that caregivers and health care staff should be aware of depression in older adults derived from physical degeneration

of various systems that transform into illnesses, especially for older adults with several health problems. Consequently, caregivers and healthcare staff should not neglect, and should give significance to health assessment for older adults, because they will create better understanding of the existence of depression in older adults.

From this study, the functional ability, summing scores of the MBAI and CAI, was not found to be the significant predictor of depression in older adults according to multiple regression analysis. According to findings, all older adults were able to perform the basic activities of daily living (MBAI), while for complicated activities of daily living, only some of them can perform these kinds of activities. Since functional ability was the summing score of MBAI and CAI and all older adults were able to perform the basic activities of daily living (MBAI), it seemed that the relationship between functional ability and depression in older adults varied according to the abilities of older adults to perform complicated activities of daily living, such as using public transportation, and preparing for food. The reason that functional ability did not emerge as predictor of depression may be from the unvaried scores of CAI so it can not exert its effect on depression. This result should be viewed as tentative and further study regarding this variable should be conducted. In the future study, various functional ability which is recruited according to different age group, should be included.

Although functional ability could not predict depression, it was associated with depression in the older adults. Hence, the functional ability of older adults with physical deficits should not be neglected. Future research should use a variable, functional ability (MBAI and CAI) and should consider the qualifications of the sample group, such as selection of samples who have differences in functional ability for the potential prediction of depression in older adults.

CHAPTER VI

CONCLUSION

In this chapter, the summary of the study, recommendations, and limitations of the study are presented.

Summary of the Study

This study was a descriptive correlational research design aiming at investigating the relationships of health status, family relations, and loneliness to depression in older adults. The subjects in this study were older adults, aged 60 or older, and living in Chainat Provinces. Data were collected during July to August 2004. One hundred and ten older adults were recruited for this study by multi-stage sampling. However, 100 older adults were eligible according to study inclusion criteria. Seven instruments were used in the study, which were 1) the Demographic Data Questionnaire, 2) the Set Test, 3) the Modified Barthel ADL Index, 4) Chula ADL Index, 5) the Family Relationship Scale 6) the Loneliness Scale, and 7) the Thai Geriatric Depression Scale. The Cronbach's alpha coefficient for Family Relationship Scale, The Loneliness Scale, and Thai Geriatric Depression Scale were .80, .90, and .90, respectively. Before being analyzed, data were cleaned and checked for problems that needed to be addressed and managed. The problems emerged involving outliers of the four independent variables. Four samples were deleted and the total samples of 96 were used for data analysis. The data were analyzed in terms of frequency, percentage, mean, standard deviation, Pearson's product moment correlation, and Stepwise multiple regression analysis.

The results could be summarized as follows.

1. Demographic Data

Data analysis were done on 96 older adults with 56 females (58.3%) and 40 males (41.7%), ranging in age from 60 to 92 years ($M = 73.89$; $SD = 6.79$). The majority of the participant were married (44%), finished primary school (76%), and unemployed occupation (59.4%). In term of income, the majority of the participants (66.7%) earned lower than 2,000 baht per month, earned income from spouse and children (79.2%), and reported insufficient income (57.3%). The most common hobby for the participants was watching television (44.8%). Finally, majority of the participants (39.6%) lived with their spouse and children.

2. Study's variables

The health status was reported in term of the number of health problems and functional ability. The majority of the older adults had health problems (96.9%). The number of health problems ranged from 0 to 10. ($Mean = 3.9$, $SD = 2.7$) The most common health problems among the older adults were arthritis (67.7%) and visual impairment (66.7%).

The scores on functional ability, including scores on the Modified Barthel ADL Index and those on the Chula ADL Index, for the sample, the scores of MBAI ranged from 15 to 20 with a mean of 18.92 and a standard deviation of 1.39. For Chula ADL, scores ranged from 0 to 9 with a mean of 7.27 and a standard deviation of 1.92, indicating that functional ability of the participants in performing basic activities of daily living and instrumental activities of daily living of this sample were in good level and rather independent.

Family relations

The majority of the participants had a good level of family relations (78.1%) and 21.9% had a moderate level of family relations.

Loneliness

The majority of the participants had moderate level of loneliness (55.2%), 33.3% had low level of loneliness and 11.5 % had high level of loneliness.

Depression

The majority of the participants had moderate depression (37.5%), 35.5% had no depression, 26% had mild depression, and 1% had severe depression.

3. The number of health problems was moderately and positively correlated with depression ($r = .55, p < .01$).

4. The functional ability was weakly and negatively correlated with depression ($r = -.32, p < .01$).

5. Family relations was moderately and negatively correlated with depression ($r = -.57, p < .01$).

6. Loneliness was highly and positively correlated with depression ($r = .75, p < .01$).

7. Loneliness, family relations and the number of health problems could explain 62% of the variance in depression in older adults ($F = 50.87, p < .001$). Loneliness was the strongest predictor followed by family relations, and the number of health problems ($\beta = .54, -.20, .19$, respectively). The functional ability did not emerge as predictor of depression in older adults.

Recommendations

Findings from this study have important implications for nursing practice. First, this study demonstrated the important role of loneliness on depression in older adults. This finding should guide nursing practice toward older adults. For example, assessment for depression in older adults should include information about loneliness. In addition, there should be more awareness of depression in older adults who have been loneliness. Thus, the findings suggested the important of prevention and intervention to older adults who have been loneliness. Health personnel in the area should promote social activities by arranging group activities such as Community Elder Club, friend-help-friend group and support group. These activities may help promote self-esteem and decrease feeling of loneliness in older adults. In addition, nurse should educate family members to be aware of the elderly's family of loneliness and thus they should spend more time with elderly in their family.

Secondly, family relations also emerged as an important predictor in older adults, suggesting that adequate attention should be given to this variable as part of the health assessment in older adults. Interventions provided to older adults with depression should also focus on improving family relationship in elderly's families.

Thirdly, the results also revealed the important role of the number of health problems on depression in older adults. Thus, the results suggested that adequate attention should be given to the number of health problems as part of the health assessment in older adults. Interventions strategies for older adults should include continuous care for older adults at home along with consultation in order to assure them health status.

Finally, although the functional ability did not emerge as a predictor of depression in older adults, the results from correlation analysis showed that it had negative relationship to depression in older adults. The finding suggested the important role of this variable on mental health status of older adults. Therefore, nurse should pay more attention to depression in elderly who have or experience functional ability loss. In addition, the family members should be informed to be alerted for depressive symptoms in elderly who faces with functional ability loss.

Recommendations for Future Research

Given the limitations of this study, the following issues are suggested for future research:

1. In order to increase understanding of depression in older adults, other variables that may influence on depression in older adults should be studied, such as stressful life event, loss or separation from close person, and history of depression in family.
2. The future study should be done in examining the factors that influence on loneliness in older adults in order to better understand the depression problem in older adults.
3. A longitudinal study should be used to investigate the causal relationships between variables.

Limitations of this study

1. The first limitation involves the sample. The data were collected only in Chainat Province, therefore, the finding of this study can be generalize to older adults only in Anghong, Singburi, and Lobburi which had similar lifestyle and geography to older adults in Chainat province.

2. The second limitation of this study involves the study design, which is cross-sectional. Although the cross-sectional design is appropriate for the study, it did not allow interpretation of the findings further than the associations between variables of interests at one point in time. In addition, results of this study suggest that a cross-sectional design may not be adequate to disentangle the complicated relationships between the variables measured. Therefore, a longitudinal design would be useful for future research so that more implications regarding the causal relationship between variables can be examined.

3. The third limitation of this study related to participant burden perceived by older adults because of the length of interviewing time. The length of time interviewing could contribute to fatigue and burdensome, which in turn, impacting on the response.

BIBLIOGRAPHY

- Abdulhalim, A. Ahmed. (1991). *Prevalence and Associated Factor of Depression among the elderly people in the Rural Area of Thailand*. A paper submitted in partial fulfillment of the requirements of the Degree of Master of the public health Mahidol University.
- Alexopoulos, G. S., Vrontou, C., Kakuma, T., Meyers, B. S., Young, R.C., Klausner, E., & Clarkin, J. (1996). Disability in geriatric depression. *American Journal of Psychiatry*. 153 (7), 877-885.
- APA. (2000). *DSM-IV-TR. Diagnostic and statistical manual of mental disorders*. Washington D. C.: American Psychiatric Association.
- Beekman, A.T.F., Deeg, D.J.H., Tilburg, T.V., Smit, J.H., Hooijer, C., & Tilburg W.V. (1995). Predicting the course of depression in the older population : results from a community- based study in the Netherlands. *Journal of Affective disorder*. 34, 41-49.
- Beekman, A.T.F., Deeg, D.J.H., Smit, J.H., & Tilburg W.V. (1995). Major and minor depression in late life. *Journal of Affective disorder*. 36 (), 65-75.
- Bennett, J. A. (1999). Activities of daily living old-fashioned or still useful? *Journal of Gerontological Nursing*. 25 (4), 22-29.
- Berg, S., Mellstrom, D., Persson, G., & Svanborg, A. (1981). Loneliness in the Swedish aged. *Journal of Gerontology*, 36 (3), 342-346.
- Berkman, L.F., Berkman, C.S., Kasl, S., Freeman, D.H., Leo, L., Ostfeld, A.D., Cornoni- Huntley, J., & Brody, J.A. (1986). Depressive symptoms in relation to physical health and functioning in the elderly. *American Journal of Epidemiology*, 124, 372-388.
- Blazer, et al.(1991). The association of age and depression among the elderly: An epidemiologic exploration . *Journal of Gerontology*, 46, 210-215.
- Blazer,D.G. (1982). *Depression in late life*. (2 nd ed.). St Louis, MO: Mosby.

- Blazer, D.G. (1994). *Principle and Practice of Geriatric Psychiatry*. Chichester: John Wiley & Sons.
- Brant, B. A., & Osgood, N. J. (1990). The suicidal patient in long term care institutions. *Journal of Gerontological Nursing*, 16, 15-18.
- Bruce, M. L., Seeman, T.E., Merrill, S.S., & Blazer, D.G. (1994). The impact of depressive symptomatology on physical disability: MacArthur studies of successful aging. *American Journal of Public Health*, 84 (11), 1796-1799.
- Butler, R., & Orrell, M. (1998). Late-life depression. *Current Opinion in Psychiatry*, 11 (4), 435-439.
- Butler, R. N. (1997). Late-life depression: how to make a difficult diagnosis. *Geriatric*, 52 (3), 37-50.
- Burn, N., & Grove, S. K. (1993). *The practice of nursing research: conduct critique & utilization*. (2nd ed.). U.S.A.: W. B. Saunders.
- Christ, M.A., & Hohloch, F.J. (1988). *Gerontologic nursing*. Philadelphia: F. A. Davis.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*, NJ: Lawrence Erlbaum.
- Copel, L. C. (1988). Loneliness. *Journal of Psychosocial Nursing*, 26 (1), 14-19.
- Creecy, R.F., Berg, W. E., & Wright, R. (1985). Loneliness among the elderly: A causal approach. *Journal of Gerontology*, 40 (4), 487-493.
- Cruz, A. D. (1986). On loneliness and the elderly. *Journal of Gerontological Nursing*, 12 (11), 22-27.
- Delgado, P. I. (1992). Neurochemistry. In E. S. Paykel (Eds), *Handbook of affective disorders* (2nd ed). New York: Guilford.
- Donaldson, J. M., & Roger, W. (1996). Loneliness in elderly people: an important area for nursing research. *Journal of Advance Nursing*, 24 (5), 952-959.
- Douglas, G., & Carroll, M. D. (1965). Functional evaluation the Barthel Index. *Maryland State Medical Journal*, 21, 22, 23(February), 61-65.
- Dunkle, R.E, Kart, C.S., & Lockery, S.A. (1994). Self-care. In B.R. Bonder. & M.B. Wagner (Eds.), *Functional performance in older adults*. Philadelphia, PA: F. A. Davis Company.
- Eliopoulos, C. (1993). *Gerontological Nursing*. (3rd ed.). Philadelphia: J. B. Lippincott.

- Eliopoulos, C. (2001). *Gerontological Nursing*. Philadelphia: J. B. Lippincott.
- Forsell, Y., Jorm, A.F., & Winblad, B. (1997). Suicidal thoughts and associated factors in an elderly population. *Acta Psychiatrica Scandinavica*. 95, 108-111.
- Friedman, M. M. (1986). *Family nursing: Theory and Assessment*. New York: Appleton- Century Crofts.
- Fromm - Reichmann, F. (1959). Loneliness. *Psychiatry*, 22, 1-15.
- Geerlings, S.W., Beekman, A.T.F., Deeg, D.J.H., & Van Tilburg, W. (2000). Physical health and the onset and persistence of depression in older adults: an eight-wave prospective community- based study. *Psychological Medicine*, 30 (2), 369-380.
- Green, B. H., Copeland, J.R.M., Dewey, M.E., Sharma, V., Saunders, P.A., Davidson, I.A., Sullivan, C., & McWilliam, C. (1992). Risk factors for depression in elderly people: a prospective study. *Acta Psychiatrica Scandinavica*. 86, 213-217.
- Hays, A. (1984). The Set Test to screen mental status quickly. *Geriatric Nursing*, 5 (2), 96-97.
- Hick, T. J. (2000). What is your life like now? Loneliness and elderly individuals residing in nursing home. *Journal of Gerontological Nursing*. 26 (8), 15-19.
- Holmen, K., Ericsson, K., Anderson, L. & Winblad, B. (1992). Loneliness among elderly people living in Stockholm a population study. *Journal of Advance Nursing*. 17, 43-51.
- Isaacs, B., & Kennie, A. T. (1973). The Set Test as an aid to detection of dementia in old people. *British Journal of Psychiatry*, 123, 467-470.
- Jitapunkul, S., Kamolratanakul, P., Chandraprasert, S., & Bunnag, S. (1994). Disability among Thai elderly living in Klong Toey Slum. *Journal of the Medical Association of Thailand*. 77 (5), 231-238.
- Keele- Card, G., et al. (1993). Loneliness, depression, and social support of patients with COPD and their spouses. *Public Health Nursing*, 10 (4), 245-251.
- Kennedy, G. J., Kelman, H.R., Thomas, C., Wisniewski, W., Metz, W., Mezt, H., & Bijur, P.E. (1989). Hierarchy of characteristics associated with depressive

- symptoms in an urban elderly sample. *American Journal of Psychiatry*. 146 (2), 220-225.
- Kennedy, G.J., Kelman, H.R., & Thomas, C. (1991). Persistence and remission of depressive systems in late life. *American Journal of Psychiatry*. 148 (2), 174-178.
- Kim, O. (1999). Predictors of loneliness in elderly Korean immigrant women living in the United States of America. *Journal of Advance Nursing*. 29 (5), 1082-1088.
- Kositanon, W. (1999). *The effect of group rational emotive behavior therapy on decreasing loneliness in the elderly*. Master's thesis in Arts (Counseling Psychology), Faculty of Psychology, Chulalongkorn University.
- Kranch, P. (1995). Assessment of depressed older persons living in a home setting. *Home Health Care Nurse*. 13 (3), 61-64.
- Leakoff, S.E., Cleaey, P.D., & Wetle, T. (1987). Differences in the appraisal of health between aged and middle aged adults. *Journal of Gerontology*, 42 (1), 114-120.
- Lunt, P.K. (1991). The perceived causal structure of loneliness. *Journal of Personality and Social Psychology*. 61 (1), 26-34.
- Malathum, P. (2001). *A model of factors contributing to perceived abilities for health promotion self-care of community-dwelling Thai older adults*. Unpublished doctoral dissertation, The University of Texas at Austin.
- Marilyn, M., & Friedman. (1992). *Family Nursing Theory and Practice*. (3rd ed.). USA.: Appleton & Lange.
- Matthaya, W. (2000). *The effects of group process activities on the reduction of loneliness in the elderly at Khaoborkaew Home for the aged, Nakornsawan province*. Master's thesis in Science (Public Health), Faculty of Graduate Studies, Mahidol University.
- McInnis, G. J. & White, J.H. (2001). A phenomenological exploration of loneliness in the older adults. *Archives of Psychiatric Nursing*. 15 (3), 128-139.
- Medley, L. (1976). Satisfaction with Life among Person sixty-five years and older: A Causal. *Journal of Gerontology*, 31 (July), 445-455.
- Miller, C.A. (1995). *Nursing Care of Older Adults Theory and Practice* (2nd ed). Philadelphia. Lippincott.

- Mullins, L.C., Tucker, R., Longino, C.F. Jr., & Marshal, V. (1989). An examination of loneliness among elderly Canadian seasonal residents in Florida. *Journal of Gerontology*, 44 (2), 80-86.
- Munro, B.H. (1997). *Statistical Methods for Health Care Research* (3rd ed.). New York: Lippincott.
- Munro, B.H. (2001). *Statistical Methods for Health Care Research* (4th ed.). New York: Lippincott.
- Murphy, E. (1982). Social origins of depression in old age. *British Journal of Psychiatry*. 141, 135- 142.
- Murphy, E. (1983). The prognosis of depression in old age. *British Journal of Psychiatry*. 142, 111- 119.
- Murphy, P. M. & Kupshik, G. A. (1991). *Loneliness, stress and well- being*. New York: Routledge.
- Murrell, S. A., Himmelfarb, S. & Wright, K. (1983). Prevalence of depression and its correlates in older adults. *American Journal of Epidemiology*, 117 (2), 173-185.
- Niyomthai, N. (2002). *Caregiving duration, family life events, family hardiness and well being of family caregivers of stroke survivors*. Master's thesis in Nursing Science (Adult nursing), Faculty of Graduate Studies, Mahidol University.
- Oxman, T. E., Berkman, L.F., Kasl, S., Freeman, D.H.J.R., & Barret, J. (1992). Social support and depressive symptoms in the elderly. *American Journal of Epidemiology*, 135, 356-368.
- O'Toole, S. M., & Johnson, D.A. (1997). Psychobiology and Psychopharmacotherapy of Unipolar Major Depression: Review. *Archives of Psychiatric Nursing*, 11 (6), 304-313.
- Paykel, E. S. (1994). Life events, social support and depression. *Acta Psychiatrica Scandinavica, Suppl.* 377, 50-58.
- Polit, D.F., & Hungler, B.P. (1988). *Nursing research: principle and methods*. (5th ed.). Philadelphia: J. B. Lippincott..
- Prince, M. J., Harwood, R.H., Blizard, R. A., Thomas, A., & Mann, A.H. (1997). Social support deficits, loneliness and life events as risk factors for depression

- in old age. The Gospel Oak Project VI. *Psychological Medicine*, 27 (2), 323-332.
- Roberts, R.E., Kaplan, A.G., Shema, S.J., & Strawbridge, W. J. (1997). Does growing old increase the risk for depression? *American Journal of Psychiatry*. 154 (10), 1384-1390.
- Rodgers, B.L. (1989). Loneliness. *Journal of Gerontological Nursing*, 15 (8), 16-21.
- Russell, D., Peplau, L. A., & Cutrona, C.E. (1980). The revised UCLA loneliness scale: concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39 (3), 472-480.
- Ryan, M.C., & Patterson, J. (1987). Loneliness in the elderly. *Journal of Gerontological Nursing*, 13 (5), 7-11.
- Sable, J.A., Dunn, L.B., & Zisook, S. (2002). Late- life depression how to identify its symptoms and provide effective treatment. *Geriatrics*. 57 (2), 18-35.
- Sangon, S. (2001). *Predictors of depression in Thai women*. Unpublished doctoral dissertation, The University of Michigan.
- Sangsawang, K. (2002). *The effects of group counseling on loneliness in the elderly*. Master's thesis in Nursing Science (Psychiatric and mental health nursing), Faculty of Graduate Studies, Mahidol University.
- Shah, S., Vanclay, F. & Cooper, B. (1989). Improving the sensitivity of the Barthel Index for stroke rehabilitation. *Journal of Clinical Epidemiology*, 42 (8), 703-709.
- Shultz, C. M. (1993). Loneliness. In Rawlins, R. P., Williams, S. R., & Beck, C. K. (Eds). *Mental health psychiatric nursing: A holistic life- cycle approach*. (3rd ed.). St.Louis: Mosby.
- Slama, C.A. & Bergman-Evans, B. (2000). An exploration of loneliness, helplessness and boredom of residents of a veterans home. *Journal of Psychosocial Nursing*, 38 (12), 36-43.
- Stanley & Beare. (1994). *Gerontological Nursing*. Philadelphia: F.A. Davis.
- Steiner, D., & Marcopulos, B. (1991). Depression in the elderly: characteristics and clinical management. *Nursing Clinics of North American*. 26 (3), 585- 600.

- Steven, J. (1996). *Applied Multivariate Statistics for the social sciences* (3rd ed.). New Jersey: Lawrence Erlbaum.
- Stuart, G. W. (2001). Emotional responses and mood disorder. In G. W. Stuart & M. T. Laraia (Eds), *Principles & practice of psychiatric nursing* (5th ed.). Baltimore: Mosby.
- Syvalahti, E. K. (1994). Biological aspects of depression. *Acta Psychiatrica Scandinavica, Suppl. 377*, 11-15.
- Sutthichai, J., Pilom, K., & Shan, E. (1994). The Meaning of Activities of Daily Living in a Thai Elderly Population: Development of a New Index. *Age and Aging*, 23, 97-101.
- Techavanit, N. (2001). *Effects of a self- help group on depression in the elderly with primary hypertension*. Master's thesis in Nursing (Psychiatric-mental health nursing), Faculty of Graduate Studies, Mahidol University.
- Valente, S. M. (1994). Recognizing depression in elderly patterns. *American Journal of Nursing*, 94 (12), 18-28.
- Varcarolis, E. M. (1998). *Foundation of Psychiatric Mental Health Nursing*, (3rd ed.). Philadelphia: W.B. Saunders.
- Zerhusen, D.J., Boyle, K., & Wilson, W. (1991). Out of the darkness: group cognitive therapy for depressed elderly. *Journal of Gerontological Nursing*, 29 (9), 17-21.
- กชกร สังขชาติ. (2536). (Kodchakorn Sangkhachart, B. E. 2536). *ความรู้เบื้องต้นเกี่ยวกับผู้สูงอายุ*. ภาควิชาการศึกษานอกระบบ คณะศึกษาศาสตร์ มหาวิทยาลัยบูรพา.
- กนกรัตน์ สุขะตุงคะ และคณะ. (2542). (Kanokrat Sukatungka, B. E. 2542). *ความซึมเศร้าและภาวะสมองเสื่อมในผู้สูงอายุไทยในชุมชนชนบท และชุมชนเมือง*. *สารศิริราช*, 51 (4), 232-243.
- กมลสิน สาตรา. (2531). (Komlin Satra, B. E. 2531). *ความซึมเศร้าในผู้สูงอายุ : ศึกษาในกรณีผู้สูงอายุในสถานสงเคราะห์คนชรา บ้านธรรมปกรณัม จังหวัดนครราชสีมา*. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาจิตวิทยาคลินิก บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.

- กมลลิน แสงสีทอง. (2536). (Komlin Sangseetong, B. E. 2536). “สภาวะการณ์ของคนชราในครอบครัวไทย: กรณีศึกษากลุ่มคนชราในสถานสงเคราะห์บ้านบางแค”. รายงานวิจัย มหาวิทยาลัยธรรมศาสตร์.
- กัลยา วานิชย์บัญชา. (2546). (Kanlaya Vanichbuncha, B. E. 2546). *การใช้ SPSS for Window ในการวิเคราะห์ข้อมูล*. กรุงเทพฯ :ธรรมสาร.
- กาญจนา ฟุ้งไพศาล. (2539). (Kanchana Fungphaisan, B. E. 2539). *ปัจจัยที่มีความสัมพันธ์ต่อความซึมเศร้าของผู้สูงอายุ. เขตเทศบาลเมืองกำแพงเพชร อำเภอเมือง จังหวัดกำแพงเพชร. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาวิทยาการระบาด บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.*
- เกริกศักดิ์ บุญญานพวงศ์, สุรีย์ บุญญานพวงศ์ และสมศักดิ์ ฉันทะ. (2538). *ชีวิตคนชราในจังหวัดเชียงใหม่*. เชียงใหม่: สถาบันวิจัยสังคม มหาวิทยาลัยเชียงใหม่.
- เกษม ต้นติผลาชีวะ และกุลยา ต้นติผลาชีวะ. (2538). (Kasem Tantipalacheva & Kulaya Tantipalacheva, B. E. 2538). *การรักษาสุขภาพในวัยสูงอายุ*. กรุงเทพฯ : อรุณการพิมพ์.
- เกษม เล่งเวหาสถิตย์ และคณะ. (2540). (Kasem Lengwehastit, B. E. 2540). *ปัจจัยที่มีความสัมพันธ์ต่อความซึมเศร้าของผู้สูงอายุ เขตอำเภอเมือง จังหวัดกำแพงเพชร. วารสารวิชาการแพทย์ เขต 8, 5 (2), 115-121.*
- คำหวาน วิสเพ็ญ. (2541). (Kumwan Weesapen, B. E. 2541). *การพยาบาลผู้ที่มีพฤติกรรมผิดปกติทางจิต. ใน นวีวรรณ สัตยธรรม (บรรณาธิการ), การพยาบาลจิตเวชและสุขภาพจิต. กรุงเทพฯ : ยุทธรินทร์การพิมพ์.*
- จงรักษ์ สุภกิจเจริญ. (2538). (Jongrak Suppakijcharoen, B. E. 2538). *การศึกษาความสัมพันธ์ระหว่างการยอมรับตนเอง สัมพันธภาพในครอบครัว และพฤติกรรมเผชิญภาวะเครียดในผู้ป่วยสูงอายุ. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลอายุศาสตร์-ศัลยศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.*
- จารุวรรณ เหมะธร, สมใจ ทุนกุล, จรรยา เสียงเสนาะ, และ สุลี ทองวิเชียร. (2540). *ความสัมพันธ์ระหว่างปัจจัยคัดสรรกับความซึมเศร้าของผู้สูงอายุในชุมชนเขตเมือง กรุงเทพมหานคร. วารสารพยาบาลสาธารณสุข, 11 (1), 49-56.*
- จินตนา สงค์ประเสริฐ. (2538). (Jintana Songprasert, B. E. 2538). *ผู้สูงอายุ*. เชียงใหม่ : พงษ์สวัสดิ์การพิมพ์.

- จันทร์เพ็ญ ชูประภาวรรณ. (2543). (Janpen Chuprapawan, B. E. 2543). *สถานะสุขภาพคนไทย : สุขภาพคนไทย ปี พ.ศ. 2543*. นนทบุรี : สถาบันวิจัยระบบสาธารณสุข.
- ฉวีวรรณ แก้วพรหม. (2530). (Chaweewan Kaewprom, B. E. 2530). *ความสัมพันธ์ระหว่างโครงสร้างเครือข่ายทางสังคมและการสนับสนุนทางสังคมกับสุขภาพจิตของผู้สูงอายุ กรุงเทพมหานคร. วิทยาลัยพยาบาลปริญาครุศาสตร์มหาบัณฑิต, บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย.*
- ชอลดา พันธุ์เสนา. (2536). (Cholada Punsena, B. E. 2536). *การพยาบาลจิตสังคมในผู้ป่วยภาวะวิกฤต ตามแบบแผนสุขภาพ. กรุงเทพฯ : อมรินทร์พริ้นติ้งกรุ๊ป.*
- ชัดเจน จันทรพัฒน์. (2543). (Chadjen Jantarpat, B. E. 2543). *ความสัมพันธ์ระหว่างปัจจัยคัดสรรกับภาวะซึมเศร้าของผู้สูงอายุในโรงพยาบาล. วิทยาลัยพยาบาลศาสตร์มหาบัณฑิต, บัณฑิตวิทยาลัย มหาวิทยาลัยสงขลานครินทร์.*
- ชุตินา สืบวงศ์ลี. (2544). (Chutima Suebwonglee, B. E. 2544). *การสำรวจภาวะสมองเสื่อมในผู้สูงอายุอำเภอเมือง จังหวัดนครสวรรค์ . วิทยาลัยพยาบาลศาสตร์มหาบัณฑิต, สาขาวิชาการพยาบาลผู้ใหญ่ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.*
- ชูศักดิ์ เวชแพทย์. (2532). (Chusak Wechat, B. E. 2532). *การปฏิบัติตัวของผู้สูงอายุเพื่อให้อายุยืน. กรุงเทพฯ : สุภาวิชัยการพิมพ์.*
- ถนอมขวัญ ทวีบุรณ และสมจินต์ เพชรพันธุ์ศรี. (2542). (Tanomkwan Taweboon & Somjin Petchepansri, B. E. 2542). *ภาวะซึมเศร้าของผู้สูงอายุในชมรมผู้สูงอายุ เขต กรุงเทพมหานคร. รายงานวิจัย คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล.*
- ทัศนีย์ เกริกกุลธร. (2536). (Tasane Karkkullathron, B. E. 2536). *การศึกษาการสนับสนุนทางสังคม และการปรับตัวของผู้สูงอายุในเขตเทศบาลเมืองสระบุรี . วิทยาลัยพยาบาลศาสตร์มหาบัณฑิต, สาขาวิชาพยาบาลศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.*
- ธิดา มีศิริ. (2541). (Tida Meesiri, B. E. 2541). *การศึกษาความว่าหวของผู้สูงอายุในชุมชนแออัดในเขตเทศบาลเมืองสุรินทร์. วิทยาลัยพยาบาลศาสตร์มหาบัณฑิต, บัณฑิตวิทยาลัย มหาวิทยาลัยขอนแก่น.*
- นภาพร ชโยวรรณ และจอห์น โนเดล. (2539). (Napaporn Chayowan & John Nodel, B. E. 2539). *รายงานสำรวจสภาวะผู้สูงอายุในประเทศไทย. รายงานวิจัย สถาบันประชากรศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย.*
- นภาพร วงศ์ใหญ่. (2542). (Napaporn Wongyai, B. E. 2542). *ความหวังและพฤติกรรมการดูแลตนเองด้านสุขภาพจิตของผู้สูงอายุจังหวัดพะเยา. วิทยาลัยพยาบาลศาสตร์*

มหำบัณฑิต, สาขาวิชาสุขภาพจิตและการพยาบาลจิตเวช บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.

- นิพนธ์ พวงวรินทร์ และคณะ. (2537). (Nipon Phuagwarin, B. E. 2537). แบบวัดความเศร้าในผู้สูงอายุของไทย. *สารศิริราช*, 46 (1), 1-9.
- เนตรนภา จัตุรงค์แสง. (2540). (Netnapa Jaturongsang, B. E. 2540). การเปรียบเทียบอัตมโนทัศน์ และความซึมเศร้าของผู้สูงอายุที่อาศัยอยู่ภายในและภายนอกสถานสงเคราะห์คนชรา. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาสังคมศาสตร์การแพทย์และสาธารณสุข บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- นันทิกา ทวิชาชาติ และคณะ. (2533). (Nantika Twichachat, B. E. 2533). การศึกษาความสัมพันธ์ของปัจจัยทางจิต-สังคม ต่อภาวะซึมเศร้าในผู้สูงอายุ: เปรียบเทียบในเขตกรุงเทพมหานครและจังหวัดอุทัยธานี. *จุฬาลงกรณ์เวชสาร*, 35 (4), 195-203.
- นิรนาท วิทโยชกติกุล. (2534). (Nilanat Witayachongkitikun, B. E. 2534). ความสามารถในการดูแลตนเองและภาวะสุขภาพของผู้สูงอายุ. วิทยานิพนธ์วิทยาศาสตรมหาบัณฑิต, สาขาวิชาพยาบาลศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- บรรลุ ศิริพานิช และคณะ. (2531). (Banloo Siripanich, B. E. 2531). พฤติกรรมและการดำเนินชีวิตของผู้สูงอายุไทยที่มีอายุยืนยาวและแข็งแรง. รายงานวิจัย องค์การอนามัยโลก กรุงเทพฯ.
- บุญพา ณ นคร. (2545). (Boonpa Na Nakorn, B. E. 2545). พฤติกรรมส่งเสริมสุขภาพจิตของผู้สูงอายุ จังหวัดสุราษฎร์ธานี. สารนิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาวิชาสุขภาพจิตและการพยาบาลจิตเวช บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.
- ประภาเพ็ญ สุวรรณ. (2537). (Prapapen Suwan, B. E. 2537). การวัดสถานะทางสุขภาพ: การสร้างมาตราส่วนประมาณค่าและแบบสอบถาม. (พิมพ์ครั้งที่ 1), กรุงเทพฯ: ภาพพิมพ์.
- ปราณี วัฒนโชติ และนพดล สมบูรณ์. (2528). (Pranee Wattanachot & Nopadol Somboon, B. E. 2528). ภาวะซึมเศร้า: อธิบายบนพื้นฐานทฤษฎีจิตวิเคราะห์. *ลำปางเวชสาร*, 6(2), 157-167.
- ปราโมทย์ วังสะอาด. (2530). (Pramote Wangsaad, B. E. 2530). ปัจจัยที่มีความสัมพันธ์ต่อสุขภาพจิตของผู้สูงอายุในเขตเทศบาลเมืองกาฬสินธุ์. วิทยานิพนธ์ปริญญาศึกษาศาสตรมหาบัณฑิต, สาขาประชากรศึกษา บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.

- เปรมฤดี ศรีราม. (2539). (Premrudee Sriram, B. E. 2539). *การศึกษาความว้าเหวและการปรับตัวของผู้สูงอายุในจังหวัดอ่างทอง*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลผู้ใหญ่ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- พรพจน์ กิ่งแก้ว. (2538). (Pornpaj Kingkaew, B. E. 2538). *องค์ประกอบทางด้านครอบครัวที่มีผลต่อสุขภาพจิตของผู้สูงอายุตำบลช้างเผือก อำเภอเมือง จังหวัดเชียงใหม่*. สารนิพนธ์สาธารณสุขศาสตรมหาบัณฑิต, บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.
- พรรษต์ อินทรโกเสศ. (2541). (Pornrat Intrarakosad, B. E. 2541). *ภาวะสุขภาพของผู้สูงอายุและปัจจัยต่างๆ ทางครอบครัว*. กรุงเทพฯ : กระทรวงสาธารณสุข.
- พวงผกา ชื่นเนตรแสง. (2538). (Poungpaka Churnsangnet, B. E. 2538). *ความสัมพันธ์ระหว่างสัมพันธภาพในครอบครัว พฤติกรรมการดูแลตนเอง และความพึงพอใจในชีวิตของผู้สูงอายุ กรณีศึกษาสมาชิกชมรมผู้สูงอายุ เขตพื้นที่พัฒนาอุตสาหกรรม ชายฝั่งทะเลตะวันตก จังหวัดชลบุรี*. วิทยานิพนธ์วิทยาศาสตรมหาบัณฑิต, สาขานามัยครอบครัว บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- พัชรี ดันศิริ. (2533). (Pacharee Tansiri, B. E. 2533). *การเปลี่ยนแปลงทางจิต-สังคมในผู้สูงอายุในการพยาบาลผู้สูงอายุ*. จรัสวรรณ เทียนประภาส และพัชรี ดันศิริ บรรณาธิการ. กรุงเทพฯ : คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล.
- พีรสิทธิ์ คำนวนศิลป์และคณะ. (2523). (Peerasit Kumnounslip, B. E. 2523). *ความทันสมัยภาพพจน์เกี่ยวกับตนเอง และปัญหาบางประการของคนชรา*. รายงานวิจัย บัณฑิตพัฒนบริหารศาสตร์.
- เพ็ญศรี หลินสุวนนท์. (2543). (Pensri Linsuwanon, B. E. 2543). *การศึกษาความซึมเศร้าของผู้สูงอายุแขวงรองเมือง เขตปทุมวัน กรุงเทพมหานคร*. วิทยานิพนธ์ปริญญาศึกษาศาสตรมหาบัณฑิต, สาขาประชากรศึกษา บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- มยุรี เพชรอักษร. (2532). *กิจกรรมบำบัดสำหรับผู้สูงอายุ*. *พยาบาลสาร*, 16 (3), 28-35.
- มลลิต ชูเนตร. (2538). (Marulee ChUNET, B. E. 2538). *ปัจจัยที่มีความสัมพันธ์กับแบบแผนการดำเนินชีวิตและภาวะโภชนาการในผู้สูงอายุ อำเภอตระการพืชผล จังหวัดอุบลราชธานี*. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาวิชาวิทยาการระบาด บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- ไมตรี ดิษะรัตนกุล. (2536). (Mitree Tiyaratankul, B. E. 2536). *ปัจจัยที่มีความสัมพันธ์กับสุขภาพจิตของผู้สูงอายุในกรุงเทพมหานคร: กรณีศึกษาผู้สูงอายุกรุงเทพมหานคร*.

- วิทยานิพนธ์ปริญญาศึกษาศาสตรมหาบัณฑิต, สาขาวิจัยประชากรและสังคม บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- ราตรี สุดทรง และจุไรรัตน์ สมบุญวงศ์. (2532). ประชากรวัยสูงอายุในผู้สูงอายุ. *จุฬาลงกรณ์วารสาร*, 33 (10), 802-806.
- ละออง สุวิทาภรณ์. (2534). *ปัญหาสุขภาพอนามัยของผู้สูงอายุในชนบท กรณีศึกษาเฉพาะอำเภอควนขนุน จังหวัดพัทลุง*. วิทยานิพนธ์ปริญญาศึกษาศาสตรมหาบัณฑิต, สาขาประชากรศึกษา บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- วรรณารุ่งวนิชชา. (2535). (Wanna Rungwanicha, B. E. 2535). *การศึกษาบริโภคนิสัยและภาวะโภชนาการในผู้สูงอายุที่มีและไม่มีภาวะซึมเศร้า*. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาวิชาสาธารณสุขศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- วาสนา เทื่อนวงษ์. (2540). (Wasana Ternwong, B. E. 2540). *พฤติกรรมการดูแลตนเองและคุณภาพชีวิตของผู้สูงอายุในกรุงเทพมหานคร*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลผู้ใหญ่ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- วันเพ็ญ เอี่ยมจ้อย และสุพรรณิ เตรียมวิศิษฐ์. (2535). (Wanpen Eiumjoy & Supanee Triumwisit, B. E. 2535). *การศึกษาเปรียบเทียบระดับความวิตกกังวลระหว่างผู้สูงอายุในสถานสงเคราะห์คนชราและผู้สูงอายุที่อยู่ที่บ้าน*. รายงานวิจัย มหาวิทยาลัยพายัพ.
- วันเพ็ญ เชาว์เชิง และกรเศศ พรหมดี. (2544). (Wanpen Showserng & Karaket Promdee, B. E. 2544). *การศึกษาอัตราความชุกของภาวะสมองเสื่อม ภาวะซึมเศร้า ภาวะสุขภาพทั่วไป และปัจจัยที่มีผลต่อภาวะสมองเสื่อม ภาวะซึมเศร้าของผู้สูงอายุในจังหวัดนครราชสีมา*. รายงานวิจัย โรงพยาบาลจิตเวชนครราชสีมา กรมสุขภาพจิต กระทรวงสาธารณสุข.
- ศิริมา ลีละวงศ์. (2541). (Sirima Leelawong, B. E. 2541). *ความสัมพันธ์ระหว่างคุณลักษณะส่วนบุคคล การยอมรับกระบวนการสูงอายุ ปัจจัยครอบครัว การสนับสนุนทางสังคมกับความสามารถในการดูแลตนเองของผู้สูงอายุ*. วิทยานิพนธ์วิทยาศาสตรมหาบัณฑิต, สาขาวิชาพยาบาลสาธารณสุข บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- ศิริมา วงศ์แหลมทอง. (2542). (Sirima Wonglamthong, B. E. 2542). *ปัจจัยส่วนบุคคล การรับรู้ประโยชน์ของพฤติกรรมส่งเสริมสุขภาพ และพฤติกรรมส่งเสริมสุขภาพ*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาวิชาการพยาบาลผู้สูงอายุ บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.

- ศิริรัตน์ วิชิตตระกูลถาวร.(2545).(Sirirat Wichittakoltaworn, B. E. 2545). ความหวัง ภาวะซึมเศร้า และความสามารถในการปฏิบัติกิจกรรมในผู้สูงอายุหลังผ่าตัดหัวใจ. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาวิชาการพยาบาลผู้สูงอายุ บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.
- ศิริวรรณ พิริยคุณธร. (2544). การพยาบาลผู้ที่มีภาวะสูญเสียและเศร้าโศก. คณะพยาบาลศาสตร์ มหาวิทยาลัยสงขลานครินทร์.
- ศรีจิตรา บุญนาค, สุทธิชัย จิตะพันธ์กุล. (2542). สถานการณ์ของผู้สูงอายุไทยในปัจจุบัน: ปัญหาทางสุขภาพ ภาวะพึ่งพา และแนวโน้มนโยบายทางการแพทย์และการสาธารณสุขในผู้สูงอายุ. ใน: *ผู้สูงอายุคุณภาพ*. กรุงเทพฯ: สมาคมพัฒนาวิทยาและเวชศาสตร์ผู้สูงอายุไทย.
- ศรีเรื่อน แก้วกั้งวาล. (2533).(Srireon Kaewkungwan, B. E. 2533). ตัวแปรทางสังคมจิตวิทยาที่สัมพันธ์กับความพึงพอใจในชีวิตของผู้สูงอายุไทย. *วารสารจิตวิทยาคลินิก*, 21(1), 1-24.
- ศรีเรื่อน แก้วกั้งวาล. (2545). (Srireon Kaewkungwan, B. E. 2545). จิตวิทยาพัฒนาการชีวิตทุกช่วงวัย เล่ม 2 วัยรุ่น- วัยสูงอายุ. (พิมพ์ครั้งที่ 8). กรุงเทพฯ : มหาวิทยาลัยธรรมศาสตร์.
- ศรีวรรณ ดันศิริ. (2535).(Sriwanna Tansiri, B. E. 2535). ผลของการใช้กิจกรรมกลุ่มสัมพันธ์ต่อการลดความซึมเศร้าของผู้สูงอายุในสถานสงเคราะห์คนชราวาระสนะเวศม์ จังหวัดพระนครศรีอยุธยา. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาวิชาสาธารณสุขศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- สถาบันสุขภาพจิต กระทรวงสาธารณสุข และสมาคมจิตเวชแห่งประเทศไทย. (2536). *มาตรฐานการปฏิบัติการพยาบาลจิตเวชและสุขภาพจิต เล่ม 2*. กรุงเทพฯ : มหาวิทยาลัยธรรมศาสตร์.
- สำนักงานสถิติแห่งชาติ สำนักงานกฤษฎมมนตรี. (2543). *รายงานการสำรวจประชากรสูงอายุในประเทศไทย พ.ศ. 2543*. กรุงเทพฯ: สำนักงานสถิติแห่งชาติ.
- สมภพ เรืองตระกูล. (2533).(Sompob Ruengtrskul, B. E. 2533). *คู่มือจิตเวชศาสตร์*. (พิมพ์ครั้งที่ 4). กรุงเทพฯ : เรือนแก้วการพิมพ์.
- สมสร เชื้อหิรัญ. (2526).(Somsorn Cheryhiran, B. E. 2526). ความเศร้าและการปฏิบัติการพยาบาล : รายงานผู้ป่วย. *วารสารพยาบาลศาสตร์*, 1 (1), 101-108.
- สายยนต์ เจริญจำ. (2535).(Saiyont Charoenkum, B. E. 2535). *ปัจจัยที่มีความสัมพันธ์ต่อความซึมเศร้าของผู้สูงอายุในเขตชนบท: กรณีศึกษาผู้สูงอายุในเขตอำเภอบรรพตพิสัย จังหวัดนครสวรรค์*. วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขานามัยครอบครัว บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.

- สุกัญญา โรจน์ประเสริฐ. (2541). (Sukanya Rojprasert, B. E. 2541). *ภาวะสุขภาพจิตของผู้สูงอายุในเขตเมือง จังหวัดลพบุรี*. วิทยานิพนธ์ปริญญาโทศึกษาศาสตร์มหาบัณฑิต, สาขาศึกษาศาสตร์การแพทย์และสาธารณสุข บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- สุพรรณ นันทชัย. (2534). (Supunee Nantachai, B. E. 2534). *ความสัมพันธ์ระหว่างความวิตกกังวลและภาวะสุขภาพของผู้สูงอายุ*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลอายุรศาสตร์และศัลยศาสตร์ บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.
- สุพัตรา สุภาพ. (2531). (Supatra Suparp, B. E. 2531). *สังคมและวัฒนธรรมไทย ค่านิยมครอบครัว ศาสนา และประเพณี*. (พิมพ์ครั้งที่ 6). กรุงเทพฯ : ไทยวัฒนาพานิช
- สุรกุล เจนอบรม. (2534). (Sulakul Jenoprom, B. E. 2534). *วิทยาการผู้สูงอายุ*. กรุงเทพฯ : จุฬาลงกรณ์มหาวิทยาลัย.
- สุวณี ตันติพัฒนานนท์. (2522). (Suwanee Tantipatananon, B. E. 2522) *การพยาบาลจิตเวช*. กรุงเทพฯ : อักษรเจริญทัศน์.
- สุวรรณี มหาภายนันท์. (2538). (Suwanee Mahakayanan, B. E. 2538). *ผลการประยุกต์ใช้ระบบการพยาบาลของโอเรียมต่อความ ผาสุกภาวะแทรกซ้อนและจำนวนวันที่อยู่ในโรงพยาบาลของผู้ป่วยสูงอายุ*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลผู้ใหญ่ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.
- อภิชัย จิระประดิษฐา และสุทธิชัย จิตะพันธุ์กุล. (2539). (Apichai Jirapraditha & Sutthichai Jitapunkul, B. E. 2539). *อาการซึมเศร้าในผู้สูงอายุ*. *จุฬายุทธศาสตร์*, 9 (1), 21-27.
- อรุณี นาคะพงศ์. (2539). (Arunee Nakaphong, B.E. 2539). *ภาวะทางร่างกาย ภาวะซึมเศร้า การดูแลตนเองด้านโภชนาการ และภาวะโภชนาการของผู้สูงอายุในชุมชน*. วิทยานิพนธ์พยาบาลศาสตรมหาบัณฑิต, สาขาการพยาบาลผู้ใหญ่ บัณฑิตวิทยาลัย.
- อรพรรณ ทองแดง. (2544). (Orapan Thongtang, B.E. 2544). *รายงานการวิจัยฉบับสมบูรณ์การวิจัยเพื่อพัฒนาคู่มือสำรวจอารมณ์เศร้าด้วยตนเองในผู้สูงอายุไทย*. กรุงเทพฯ : มหาวิทยาลัยมหิดล.
- อรพรรณ ลือบุญธวัชชัย. (2543). (Orapan Lurboontawatchai, B.E. 2543). *การพยาบาลจิตเวชและสุขภาพจิต*. กรุงเทพฯ : โรงพิมพ์จุฬาลงกรณ์มหาวิทยาลัย.
- อำไพวรรณ พุ่มศรีสวัสดิ์. (2541). (Umpaiwan pumsrisawat, B.E. 2541). *การพยาบาลจิตเวชและสุขภาพจิต : แนวการปฏิบัติตามพยาธิสภาพ*. กรุงเทพฯ : วิ.เจ. พรินติ้ง.



APPENDIX

APPENDIX A

คำอธิบายโครงการวิจัย

หัวข้อเรื่อง ความสัมพันธ์ระหว่างภาวะสุขภาพ สัมพันธภาพในครอบครัว ความวิตกกังวล และภาวะซึมเศร้าในผู้สูงอายุ

วัตถุประสงค์และวิธีวิจัย

ในการวิจัยครั้งนี้ต้องการทราบความสัมพันธ์ระหว่างภาวะสุขภาพ สัมพันธภาพในครอบครัว ความวิตกกังวล และภาวะซึมเศร้าในผู้สูงอายุ รวมทั้งปัจจัยทำนายภาวะซึมเศร้าในผู้สูงอายุ โดยผู้วิจัยจะสัมภาษณ์ท่านเกี่ยวกับข้อมูลส่วนบุคคล ข้อมูลเกี่ยวกับปัญหาสุขภาพ สัมพันธภาพในครอบครัว ความวิตกกังวล และภาวะซึมเศร้า ซึ่งจะใช้เวลาประมาณ 45-60 นาที

เหตุผลที่เชิญชวนให้ท่านเข้าร่วมโครงการวิจัย

ผู้สูงอายุต้องประสบกับปัญหาต่างๆ อันเนื่องมาจากการเปลี่ยนแปลงทางด้านร่างกาย จิตใจ อารมณ์ และสังคม ซึ่งการเปลี่ยนแปลงดังกล่าวส่งผลกระทบต่อการดำเนินชีวิตของผู้สูงอายุ ดังนั้นผู้สูงอายุจึงต้องมีการปรับตัวให้เข้ากับสถานการณ์ที่เกิดขึ้น ถ้าสามารถปรับตัวได้ก็จะดำรงชีวิตได้อย่างมีความสุข แต่ในทางตรงข้ามถ้าไม่สามารถปรับตัวได้ก็จะส่งผลให้เกิดปัญหาสุขภาพจิตตามมา และจากสภาพในปัจจุบันพบว่าปัญหาสุขภาพจิตที่พบได้บ่อยในผู้สูงอายุได้แก่ ภาวะซึมเศร้า ซึ่งน่าจะมีส่วนมาจากภาวะสุขภาพ สัมพันธภาพในครอบครัว และความวิตกกังวล ดังนั้นการที่ได้ทำการศึกษาวิจัยในปัจจุบันเหล่านี้ จะทำให้เข้าใจถึงสาเหตุของการเกิดภาวะซึมเศร้าในผู้สูงอายุ ซึ่งจะช่วยให้บุคลากรทางสุขภาพมีความเข้าใจ และสามารถหาแนวทางในการ ส่งเสริม ป้องกัน ดูแล และรักษาสุขภาพของผู้สูงอายุ ได้อย่างเหมาะสมและมีประสิทธิภาพยิ่งขึ้น ซึ่งสิ่งเหล่านี้จะช่วยให้ผู้สูงอายุสามารถดำเนินชีวิตได้อย่างเหมาะสมตามวัย และมีความสุขในชีวิต

ระยะเวลาที่เข้าร่วมการวิจัย

ผู้วิจัยจะใช้เวลาในการสัมภาษณ์เป็นเวลาประมาณ 45-60 นาที

ประโยชน์ที่คาดว่าจะเกิดขึ้น

ข้อมูลที่ได้รับจะใช้เป็นแนวทางในการช่วยเหลือท่าน และผู้สูงอายุรายอื่นๆ ให้ได้รับการดูแลที่เหมาะสมและมีประสิทธิภาพยิ่งขึ้น เพื่อป้องกันปัญหาสุขภาพจิต โดยเฉพาะ ภาวะซึมเศร้าที่อาจเกิดขึ้นในวัยสูงอายุ

ความเสี่ยงหรือความไม่สบายใจที่อาจเกิดขึ้นกับผู้เข้าร่วมในการวิจัย

ไม่มีความเสี่ยงหรืออันตรายใดๆ ในการเข้าร่วมการวิจัย เนื่องจากการวิจัยครั้งนี้ไม่ได้กระทำการทดลองหรือปฏิบัติหัตถการใดๆ ที่มีการดูล้ำร่างกาย แต่ในการสัมภาษณ์อาจทำให้สูญเสียความเป็นส่วนตัวบ้าง รวมทั้งต้องใช้เวลาในการสนทนาและตอบคำถาม

ขอบเขตการดูแลรักษาความลับของข้อมูลต่างๆ

ผู้วิจัยจะเก็บข้อมูลไว้เป็นความลับ และข้อมูลที่เก็บรวบรวมมาได้ทั้งหมดจะเปิดเผยเฉพาะในรูปที่เป็นสรุปผลการวิจัยทั้งนี้ด้วยเหตุผลทางวิชาการเท่านั้น และผู้ที่จะสามารถรับรู้ข้อมูลเหล่านี้ นอกจากผู้วิจัยและอาจารย์ที่ปรึกษาแล้วต้องได้รับความยินยอมจากผู้เข้าร่วมการวิจัยก่อน

สิทธิในการถอนตัวออกจากโครงการวิจัย

ในการเข้าร่วมงานวิจัยครั้งนี้จะเป็นไปตามความสมัครใจของท่าน โดยที่ท่านสามารถยกเลิกการเข้าร่วมโครงการวิจัยนี้ได้ตลอดเวลา โดยจะไม่มีผลต่อการรักษาและการพยาบาลใดๆที่ท่านได้รับแต่อย่างไร

กรณีมีเหตุจำเป็นหรือมีปัญหา ข้อเสนอส่งผลกระทบต่อผู้วิจัย

นางสาวพรเพ็ญ สำเภา

โรงพยาบาลมโนรมย์ อ. มโนรมย์ จ. ชัยนาท 17110

โทรศัพท์ 0-5643-1376-7 , 0-1972-1930

E-mail address: c_pornpen@yahoo.com

หนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ (Informed Consent Form)

การวิจัยเรื่อง ความสัมพันธ์ระหว่างภาวะสุขภาพ สัมพันธภาพในครอบครัว ความว่าเหว่ และภาวะซึมเศร้าในผู้สูงอายุ

วันที่ให้คำยินยอม วันที่.....เดือน.....พ.ศ.

ก่อนที่จะลงนามในใบยินยอมให้ทำการวิจัยนี้ ข้าพเจ้าได้รับการอธิบายจากผู้วิจัยถึงวัตถุประสงค์ของการวิจัย วิธีการวิจัย และประโยชน์ที่จะเกิดขึ้นจากการวิจัยอย่างละเอียด และมีความเข้าใจดีแล้ว

ผู้วิจัยรับรองว่าจะตอบคำถามต่างๆ ที่ข้าพเจ้าสงสัยด้วยความเต็มใจ ไม่ปิดบังซ่อนเร้น จนข้าพเจ้าพอใจ

ข้าพเจ้ามีสิทธิที่จะบอกเลิกการเข้าร่วมโครงการวิจัยนี้เมื่อใดก็ได้ และเข้าร่วมโครงการวิจัยนี้โดยสมัครใจ และการบอกเลิกการเข้าร่วมการวิจัยนี้จะไม่ผลต่อการรักษาโรคที่ข้าพเจ้าจะพึงได้รับต่อไป

ผู้วิจัยรับรองว่าจะเก็บข้อมูลเฉพาะที่เกี่ยวกับตัวข้าพเจ้าเป็นความลับ และจะเปิดเผยได้เฉพาะในรูปที่สรุปผลการวิจัย การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆ ที่เกี่ยวข้องกระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ผู้วิจัยรับรองว่าหากมีข้อมูลเพิ่มเติมที่ส่งผลกระทบต่อการศึกษา ข้าพเจ้าจะได้รับการแจ้งให้ทราบโดยไม่ปิดบังซ่อนเร้น

ข้าพเจ้าได้อ่านข้อความข้างต้นแล้ว และมีความเข้าใจดีทุกประการ และได้ลงนามในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม

ลงนาม.....พยาน

ลงนาม.....พยาน

ในกรณีที่ผู้ยินยอมให้ทำการวิจัยไม่สามารถอ่านหนังสือได้ จะต้องได้รับการยินยอมในขณะที่ยังมีสติสัมปชัญญะ และระบุข้อความไว้ตามนี้ ข้าพเจ้าไม่สามารถอ่านหนังสือได้ แต่ผู้วิจัยได้

อ่านข้อความในใบยินยอมนี้ให้แก่ข้าพเจ้าฟังจนเข้าใจดีแล้ว ข้าพเจ้าจึงลงนาม หรือประทับลายนิ้วมือ
ของข้าพเจ้าในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม

(หรือประทับลายนิ้วมือขวา)

ลงนาม.....พยาน

ลงนาม.....พยาน





No. 85/2004

**Documentary Proof of Ethical Clearance
The Committee on Human Rights Related to
Human Experimentation
Mahidol University, Bangkok**


.....

Title of Project: Relationships of Health Status, Family Relations, Loneliness, to Depression in Older Adults

Principal Investigator: Miss Pornpen Sampao

Name of Institution: Faculty of Medicine Ramathibodi Hospital

Approved by the Committee on Human Rights Related to Human Experimentation

Signature of Chairman: 
(Professor Dr. Srisin Khusmith)

Signature of Head of Institute: 
(Professor Dr. Pornchai Matangkasombut)

Date of Approval: 11 AUG 2004

APPENDIX B

The Set Test

ส่วนที่ 1 แบบทดสอบหมวดหมู่

คำชี้แจง ให้ผู้สูงอายุบอกชื่อ สี สัตว์ ผลไม้ จังหวัด (หรืออำเภอ) ให้ได้มากที่สุดหมวดละ 10 ชื่อ

<u>สี</u>	1.....	<u>สัตว์</u>	1.....
	2.....		2.....
	3.....		3.....
	4.....		4.....
	5.....		5.....
	6.....		6.....
	7.....		7.....
	8.....		8.....
	9.....		9.....
	10.....		10.....
คะแนน	คะแนน
<u>ผลไม้</u>	1.....	<u>จังหวัด</u>	1.....
	2.....		2.....
	3.....		3.....
	4.....		4.....
	5.....		5.....
	6.....		6.....
	7.....		7.....
	8.....		8.....
	9.....		9.....
	10.....		10.....
คะแนน	คะแนน
คะแนนรวม.....	คะแนน		

APPENDIX C

Demographic Data Form

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง โปรดเติมข้อความลงในช่องว่างที่กำหนดให้ หรือเขียนเครื่องหมาย / ลงในช่อง () ให้ตรงกับความเป็นจริงของท่าน

1. เพศ (1) ชาย (0) หญิง
2. อายุปี
3. สถานภาพสมรส (0) โสด (3) หม้าย /หย่า/ แยก นาน.....ปี
(1) คู่ อยู่ด้วยกัน (2) คู่แยกกันอยู่
4. การศึกษา (0) ไม่ได้รับการศึกษา (2) มัธยมศึกษา
(1) ประถมศึกษา (3) ปวช./ปวส.
(4)ปริญญาตรี (5) สูงกว่าปริญญาตรี
() อื่นๆ โปรดระบุ.....
5. อาชีพปัจจุบัน (0) ไม่ได้ประกอบอาชีพ (2) รับจ้างทั่วไป
(1) เกษตรกรรม (3) ค้าขาย
() อื่นๆ โปรดระบุ.....
6. รายได้ปัจจุบันต่อเดือน (0) ต่ำกว่า 2,000 บาท (2) 4,001-6,000 บาท
(1) 2,001-4,000 บาท (3) มากกว่า 6,000 บาท ขึ้นไป
7. ท่านมีรายได้มาจากไหน (0) บุตร/หลาน (3) เงินบำนาญ
(1) ญาติพี่น้อง (4) ทำงานด้วยตนเอง
(2) ค่าเช่า/ดอกเบี้ย (5) เงินเก็บ
(6) เงินสงเคราะห์
8. ความเพียงพอของรายได้ (0) ไม่เพียงพอ (1) เพียงพอ
9. งานอดิเรก (0) เลี้ยงสัตว์ (2) อ่านหนังสือ
(1) ปลูกต้นไม้ (3) ดูโทรทัศน์
(4) ฟังวิทยุ (5) ดายหญ้า
(6) สานตะกร้า (7) สวดมนต์/ฟังเทศน์

10. ปัจจุบันท่านอาศัยอยู่กับใคร (0) อยู่คนเดียว (1) อยู่กับคู่สมรส
 (2) อยู่กับคู่สมรส และบุตร/หลาน (3) อยู่กับบุตร/หลาน
 (4) อยู่กับญาติ (5) อยู่กับญาติ/ลูก
 (6) อยู่กับคู่สมรส/ญาติ
11. ท่านมีโรคประจำตัว/ปัญหาสุขภาพหรือไม่ (0) ไม่มี (1) มี
12. จากข้อ 11. ท่านมีโรคประจำตัว/ ปัญหาสุขภาพ อะไรตอบได้มากกว่า 1 ข้อ
- | | |
|--|----------------------------|
| (d1) เบาหวาน | (d17) ความดันโลหิตสูง |
| (d2) หัวใจ | (d18) ปอด |
| (d3) ไต | (d19) ตับ |
| (d4) กระดูกและข้อ | (d20) ภาวะอาหาร |
| (d5) การมองเห็นผิดปกติ เช่น ต้อกระจก ตามัว | (d21) หลอดลมอักเสบ |
| (d6) หอบหืด | (d22) ทางเดินปัสสาวะอักเสบ |
| (d7) ริดสีดวงทวาร | (d23) ไขมันในเลือดสูง |
| (d8) อัมพาต อัมพฤกษ์ | (d24) ต้อเนื้อ |
| (d9) ชาปลายมือปลายเท้า | (d25) มีนิ่วในถุงน้ำดี |
| (d10) นอนไม่หลับ | (d26) ลำไส้อักเสบ |
| (d11) เหนื่อยง่าย | (d27) เจริญ |
| (d12) ท้องผูก | (d28) หูไม่ค่อยได้ยิน |
| (d13) โลหิตจาง | (d29) เบื่ออาหาร |
| (d14) ต่อมน้ำลายอักเสบ | (d30) คันตามผิวหนัง |
| (d15) ความดันต่ำ | (d31) ท่อน้ำตาอักเสบ |
| (d16) ปวดเมื่อยตามร่างกาย | (d32) นิ้ว |

APPENDIX E

The Chula Activities of Daily Living Index (CAI)

แบบประเมินความสามารถในการปฏิบัติกิจวัตรประจำวัน ดัชนีจุฬา

คำชี้แจง ใส่เครื่องหมาย / ลงในช่อง () ที่ตรงกับลักษณะของท่านมากที่สุด กิจกรรมในที่นี่ หมายถึงกิจกรรมที่ท่านทำจริงๆ ไม่ใช่กิจกรรมที่ท่านสามารถทำได้แต่ไม่ได้ทำ

1. การเดินหรือเคลื่อนที่นอกบ้าน
 0. ท่านไม่สามารถเดินได้เลย
 1. ท่านต้องใช้รถเข็น และช่วยตัวเองได้ หรือต้องการคนประคอง 2 ข้าง
 2. ท่านสามารถเดินได้เอง (รวมทั้งที่ใช้เครื่องช่วยเดิน เช่น walker)
2. การทำหรือเตรียมอาหาร หุงข้าว
 0. ท่านไม่สามารถทำได้
 1. ท่านสามารถทำได้แต่ต้องการคนช่วยในการทำ หรือจัดเตรียมการบางอย่างไว้ล่วงหน้า จึงจะทำได้
 2. ท่านสามารถทำตัวเอง
3. การทำความสะอาดบ้าน ซักหรือเสียดผ้า
 0. ท่านไม่สามารถทำได้/ต้องมีคนช่วย
 1. ท่านสามารถทำตัวเอง
 - .
 - .
 - .
 - .
 - .
5. การใช้บริการรถเมล์ รถสองแถว หรือขับรถเอง
 0. ท่านไม่สามารถทำได้
 1. ท่านสามารถทำได้แต่ต้องมีคนช่วยเหลือดูแลไปด้วย
 2. ท่านสามารถไปมาเองได้

APPENDIX F

Family Relationship Inventory

แบบวัดสัมพันธภาพในครอบครัว

คำชี้แจง แบบสอบถามนี้ต้องการทราบถึงการปฏิบัติตัวของสมาชิกในครอบครัวต่อตัวท่าน และการปฏิบัติตัวต่อกันภายในครอบครัวของท่าน โปรดตอบคำตอบให้ตรงกับความรู้สึกของท่านตามความเป็นจริงมากที่สุด โดยใส่เครื่องหมาย / ลงในช่องคำตอบที่ต้องการ เหน้การตอบมีดังนี้

จริง หมายถึง ข้อความในประโยคนั้นตรงกับความรู้สึกหรือความคิดเห็นของผู้สูงอายุ
เป็นส่วนมาก

ไม่แน่ใจ หมายถึง ข้อความในประโยคนั้นมีทั้งตรงและไม่ตรงกับกับความรู้สึกหรือความคิดเห็นของผู้สูงอายุ

ไม่จริง หมายถึง ข้อความในประโยคนั้นไม่ตรงกับความรู้สึกหรือความคิดเห็นของผู้สูงอายุ

ตัวอย่าง

ข้อความ	ใช่	ไม่แน่ใจ	ไม่ใช่
1. คนในครอบครัวรักและห่วงใยท่านเสมอ	/		

ข้อความ	ใช่	ไม่แน่ใจ	ไม่ใช่
1. คนในครอบครัวรักและห่วงใยท่านเสมอ
2. คนในครอบครัวส่วนใหญ่รู้ว่าท่านชอบ และต้องการอะไร
3. ท่านคิดว่าตนเองมีประโยชน์ต่อครอบครัว
.			
.			
.			
.			
.			
.			
.			
.			
.			
.			
15. โดยสรุปแล้วท่านคิดว่าความสัมพันธ์ระหว่างท่านกับคนในครอบครัว อยู่ในเกณฑ์ดี

APPENDIX G

Loneliness Inventory

แบบสอบถามความว้าเหว่

คำชี้แจง แบบวัดนี้มีวัตถุประสงค์เพื่อต้องการทราบความรู้สึกและความคิดเห็นของท่านเกี่ยวกับเพื่อนสนิท และความใกล้ชิดสนิทสนมของท่านกับเพื่อนที่กำลังมีอยู่ในขณะนั้น ขอให้ท่านตอบตามความเป็นจริงของท่าน ซึ่งในแต่ละข้อคำถามจะไม่มีข้อที่ถูกหรือผิด การตอบแบบวัดนี้ขอให้ท่านใส่เครื่องหมาย / ลงในช่อง () ที่ต้องการ และขอให้ตอบให้ครบทุกข้อตามในแบบวัด

1. ท่านรู้สึกว่า คนที่รู้จักทั่วไป มีการคบค้าสมาคมติดต่อเข้ากันได้ดีกับท่าน

(1) เข้ากันได้ดีทุกคน	(2) เข้ากันได้ดีเป็นส่วนใหญ่
(3) เข้ากันได้ดีบ้าง ไม่ดีบ้าง	(4) เข้ากันไม่ได้เลย
2. จริงไหมถ้าจะถามว่า ขณะนี้ท่านไม่มีเพื่อนเลย

(4) จริง	(3) มีบ้าง แต่น้อยเต็มที
(2) มีอยู่พอสมควร	(1) ยังมีเพื่อนอยู่มาก
3. เวลาเมื่อเรื่องอยากจะทำหรือใคร ท่านรู้สึกว่า

(4) ไม่มีคนให้คำปรึกษาเลย	(3) มีคนให้คำปรึกษาแต่น้อย
(2) มีคนให้คำปรึกษาพอสมควร	(1) มีคนให้คำปรึกษาอยู่มากเป็นที่พอใจ

ใจท่าน

.

.

.

.

.

.

.
20. ยามมีความทุกข์โศก ท่านมีคนคอยให้คำแนะนำ หรือปลอบโยนหรือไม่

(1) หาได้ง่าย มีมากมาย	(2) ก็พอหาได้
(3) หายาก	(4) หาไม่ได้เลย

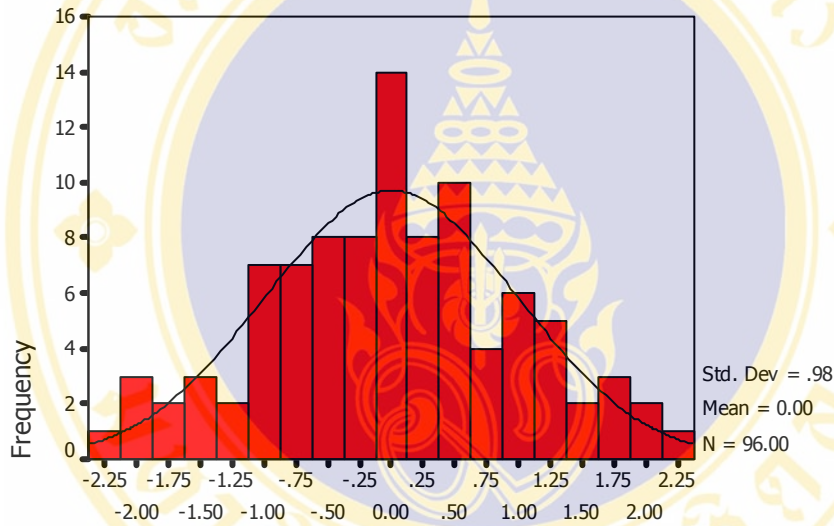
APPENDIX I

Testing Assumptions of Multiple Regression Analysis

These plots showed that the assumptions underlying the Multiple Regression Analysis were met

Histogram

Dependent Variable: Sum depression



Regression Standardized Residual

Figure 3: Histogram of Residual.

Scatterplot

Dependent Variable: Sum depression

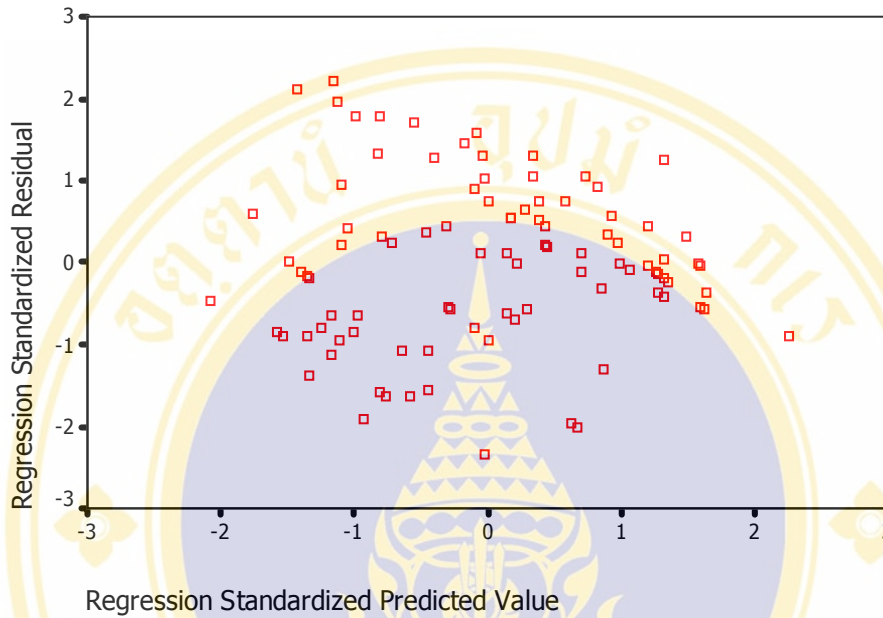


Figure 4: Plot of Residuals Against the predicted Values and against the Independent variables.

Normal P-P Plot of Regression Standard
Dependent Variable: Sum depression

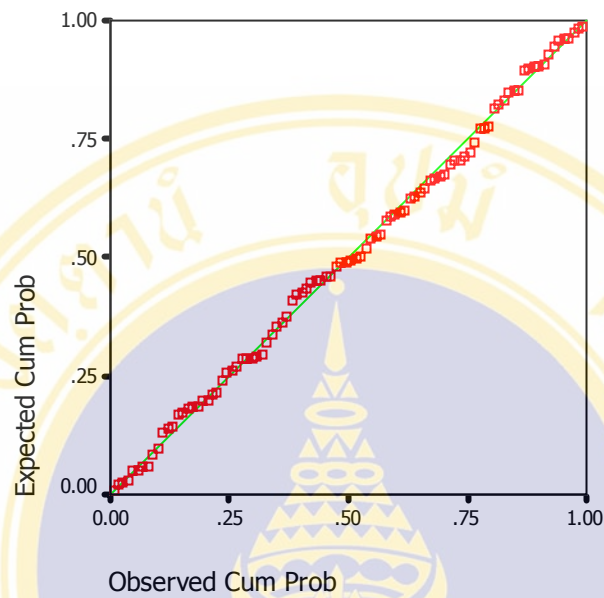
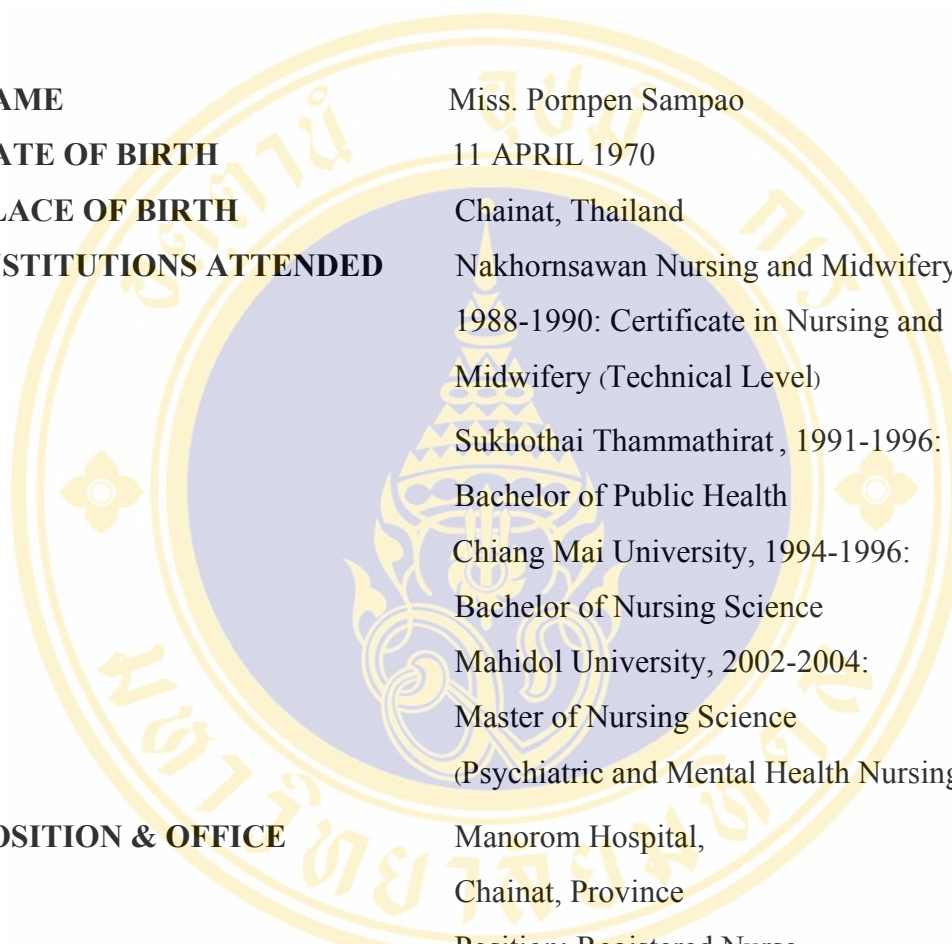


Figure 5: Normal probability plot.

BIOGRAPHY

NAME	Miss. Pornpen Sampao
DATE OF BIRTH	11 APRIL 1970
PLACE OF BIRTH	Chainat, Thailand
INSTITUTIONS ATTENDED	Nakhornsawan Nursing and Midwifery College, 1988-1990: Certificate in Nursing and Midwifery (Technical Level) Sukhothai Thammathirat , 1991-1996: Bachelor of Public Health Chiang Mai University, 1994-1996: Bachelor of Nursing Science Mahidol University, 2002-2004: Master of Nursing Science (Psychiatric and Mental Health Nursing)
POSITION & OFFICE	Manorom Hospital, Chainat, Province Position: Registered Nurse Tel. 056-431376-7