

**FAMILY FACTORS AND THEIR INFLUENCE TOWARD  
THE ELDERLY LEFT BEHIND IN THAILAND**

**ANGSANA CHUCHUAY**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR  
THE DEGREE OF MASTER OF SCIENCE  
(HUMAN DEVELOPMENT)  
FACULTY OF GRADUATE STUDIES  
MAHIDOL UNIVERSITY  
2013**

**COPYRIGHT OF MAHIDOL UNIVERSITY**

Thesis  
entitled  
**FAMILY FACTORS AND THEIR INFLUENCE TOWARD  
THE ELDERLY LEFT BEHIND IN THAILAND**

.....  
Ms.Angsana Chuchuy  
Candidate

.....  
Asst. Prof. Wimontip Musikaphan, Ph.D.  
Major advisor

.....  
Asst. Prof. Banyat Yongyuan, Ph.D.  
Co-advisor

.....  
Lect. Kaewta Nopmaneejumruslers,  
M.D.  
Co-advisor

.....  
Prof. Banchong Mahaisavariya,  
M.D., Dip Thai Board of Orthopedics  
Dean  
Faculty of Graduate Studies  
Mahidol University

.....  
Lect. Kaewta Nopmaneejumruslers,  
M.D.  
Program Director  
Master of Science Program in  
Human Development  
National Institute for Child and Family  
Development, Mahidol University

Thesis  
entitled  
**FAMILY FACTORS AND THEIR INFLUENCE TOWARD  
THE ELDERLY LEFT BEHIND IN THAILAND**

was submitted to the Faculty of Graduate Studies, Mahidol University  
for the degree of Master of Science (Human Development)

on  
October 7, 2013

.....  
Ms.Angsana Chuchuay  
Candidate

.....  
Asst. Prof. Khemika Yamarat, Ph.D.  
Chair

.....  
Asst. Prof. Wimontip Musikaphan, Ph.D.  
Member

.....  
Lect. Kaewta Nopmaneejumrulers, M.D.  
Member

.....  
Asst. Prof. Banyat Yongyuan, Ph.D.  
Member

.....  
Prof. Banchong Mahaisavariya,  
M.D., Dip Thai Board of Orthopedics  
Dean  
Faculty of Graduate Studies  
Mahidol University

.....  
Lect. Suriyadeo Tripathi, M.D.  
Director  
National Institute for Child and Family  
Development  
Mahidol University

## ACKNOWLEDGEMENTS

This research was successfully accomplished due to the kind cooperation of several persons. First of all, I would like to express my sincere thanks to Asst. Prof. Wimontip Musikaphan, my major adviser, who has provided invaluable help and constant encouragement throughout the course of this research. I am most grateful for her teaching and advice. Next, I would like to say thank you to Asst. Prof. Banyat Yongyuan and Lect. Kaewta Nopmaneejumrulers, my co-advisers, for their kind advice and opinion for completing of this thesis. Furthermore, I would like to express my gratitude to Prof. Khemika Yamarat, the thesis chairman, for her useful and valuable academic suggestions.

I appreciate all the faculty and director of National Institute for Child and Family Development for their support and encouragement

I would like to extend my sincere gratitude to my parents for their endless and unconditional love. Especially, I also thank to my best friends who assist, take care and trust that I have done.

Finally, I would like to declare that they all are a part of this thesis achievement.

Angsana Chuchuay

FAMILY FACTORS AND THEIR INFLUENCE TOWARD THE ELDERLY LEFT  
BEHIND IN THAILAND

ANGSANA CHUCHUAY 5437723 CFHD/M

M.Sc. (HUMAN DEVELOPMENT)

THESIS ADVISORY COMMITTEE: WIMONTIP MUSIKAPHAN, Ph.D., BANYAT  
YONGYUAN, Ph.D., KAEWTA NOPMANEEJUMRUSLERS, M.D.

ABSTRACT

This quantitative study is aimed to find located which family factors affect the elderly left behind in Thailand. The researcher used secondary data from the Project of Well-being Situation among Thai families conducted by the Thai Family Studies Association and the National Institute for Child and Family Development, Mahidol University, collected in 2011 that included 1,565 families. The data analysis was performed through the use of descriptive statistics which was composed of frequency, percentage, mean, standard deviation, cross tabulations, and Spearman - rank correlation coefficient.

The result revealed the factor that positively related to elderly being left behind was the level of violence in family ( $r = 0.200$ ) was statistically significant at a level of 0.01. The negative factors related to being left behind of the elderly were the level of family relationship ( $r = -0.076$ ) was statistically significant at a level of 0.01; the level of communication in family ( $r = -0.052$ ) was statistically significant at a level of 0.05, and the number of closed neighbors ( $r = -0.055$ ) was statistically significant at a level of 0.05.

KEY WORDS: FAMILY FACTORS/ BEING LEFT BEHIND/ELDERLY

83 pages

ปัจจัยครอบครัวที่ส่งผลต่อการถูกทอดทิ้งให้อยู่บ้านตามลำพังของผู้สูงอายุในประเทศไทย

FAMILY FACTORS AND THEIR INFLUENCE TOWARD THE ELDERLY LEFT BEHIND IN THAILAND

อังษณา ชูช่วย 5437723 CFHD/M

วท.ม. (พัฒนาการมนุษย์)

คณะกรรมการที่ปรึกษาวิทยานิพนธ์: วิมลทิพย์ มุสิกพันธ์, Ph.D., บัญญัติ ยง่วน, Ph.D., แก้วตา นพมณีจำรัสเลิศ, M.D.

#### บทคัดย่อ

การศึกษานี้ เป็นการวิจัยเชิงปริมาณ (Quantitative Research) มีวัตถุประสงค์เพื่อศึกษาปัจจัยครอบครัวที่ส่งผลต่อการถูกทอดทิ้งให้อยู่บ้านตามลำพังของผู้สูงอายุในประเทศไทย โดยใช้ข้อมูลทุติยภูมิ (Secondary Data) จากโครงการสถานการณ์สุขภาพของครอบครัวไทย ดำเนินการโดยสมาคมครอบครัวศึกษาแห่งประเทศไทย ร่วมกับนักวิชาการสถาบันแห่งชาติเพื่อการพัฒนาเด็กและครอบครัว มหาวิทยาลัยมหิดล เก็บรวบรวมข้อมูล ในปี พ.ศ. 2554 ซึ่งตัวอย่างที่ใช้ศึกษาในครั้งนี้มีจำนวนทั้งสิ้น 1,565 คน วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา (Descriptive Statistic) ได้แก่ การแจกแจงความถี่ (Frequency) ค่าร้อยละ (Percentage) ค่าเฉลี่ย (Mean) ค่าเบี่ยงเบนมาตรฐาน (Standard Deviation) ตารางไขว้ (Cross Tabulations Table) และการวิเคราะห์ความสัมพันธ์ โดยใช้ค่าสัมประสิทธิ์สหสัมพันธ์แบบสเปียร์แมน (Spearman - rank correlation coefficient)

ผลการวิจัย พบว่า ตัวแปรที่มีความสัมพันธ์ทางบวกกับการถูกทอดทิ้งให้อยู่บ้านตามลำพังของผู้สูงอายุ คือ ระดับความรุนแรงในครอบครัว ( $r = 0.200$ ) ที่ระดับนัยสำคัญ 0.01 ตัวแปรที่มีความสัมพันธ์ทางลบกับการถูกทอดทิ้งให้อยู่บ้านตามลำพังของผู้สูงอายุ คือ ระดับสัมพันธภาพในครอบครัว ( $r = -0.076$ ) ที่ระดับนัยสำคัญ 0.01 ระดับการสื่อสารภายในครอบครัว ( $r = -0.052$ ) ที่ระดับนัยสำคัญ 0.05 และจำนวนเพื่อนบ้านที่สนิท ( $r = -0.055$ ) ที่ระดับนัยสำคัญ 0.05

## CONTENTS

	<b>Page</b>
<b>ACKNOWLEDGEMENTS</b>	<b>iii</b>
<b>ABSTRACT (ENGLISH)</b>	<b>iv</b>
<b>ABSTRACT (THAI)</b>	<b>v</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF CHARTS</b>	<b>xi</b>
<b>CHAPTER I INTRODUCTION</b>	<b>1</b>
1.1 Background and rationale of the research	1
1.2 Objectives of the research	5
1.3 Hypotheses	5
1.4 Sample group	5
1.5 Variables of the research	6
1.6 Definitions	6
1.7 Conceptual framework	8
<b>CHAPTER II LITERATURE REVIEWS</b>	<b>9</b>
2.1 Basic concepts about elders	9
2.1.1 Elderly	9
2.1.2 The concept of age	10
2.2 Roles of the family and family violence against elders	12
2.2.1 Family roles to the elderly	12
2.2.2 Family violence against the elderly	16
2.3 Types of living of elders	19
2.4 Policy of caring for Thai elders	21

## **CONTENTS (Cont.)**

	<b>Page</b>
2.5 Related research studies	24
2.5.1 Research in Thailand	24
2.5.2 Foreign research	26
2.6 Theories and research relating to elders and selection of questions from the questionnaire	30
<b>CHAPTER III METHODOLOGY</b>	<b>38</b>
3.1 Data sources and sample group	38
3.2 Variables of the research	39
3.2.1 Independent variable	39
3.2.2 Dependent variables	41
3.3 Data analysis	41
<b>CHAPTER IV RESULTS</b>	<b>43</b>
4.1 Information about research factors	43
4.2 Correlation between elderly left behind and family factors	56
<b>CHAPTER V DISCUSSION</b>	<b>60</b>
5.1 Level of family relationship and elderly left behind	60
5.2 Level of family care and elderly left behind	62
5.3 Level of family violence and elderly left behind	63
5.4 Level of family communications and elderly left behind	65
5.5 Family income and elderly left behind	66
5.6 Household debts and elderly left behind	68
5.7 Family residence and elderly left behind	79

**CONTENTS (Cont.)**

	<b>Page</b>
5.8 Number of intimate neighbors and elderly left behind	70
<b>CHAPTER VI CONCLUSION</b>	<b>73</b>
6.1 Conclusion	73
6.2 Limitations of the research	76
6.3 Recommendations of the research	77
6.3.1 Policy suggestions	77
6.3.2 Recommendations for further study	77
<b>REFERENCES</b>	<b>78</b>
<b>BIOGRAPHY</b>	<b>83</b>

## LIST OF TABLES

<b>Table</b>		<b>Page</b>
1.1	Population census of Thailand, Year 1960-1990	1
2.1	Residence characteristics of Thai elders (60 years of age up), Year 2002	21
2.2	Theories and key concepts about elders and questions selected to be consistent with the questionnaire	30
3.1	Indicators and scoring criteria of dependent variables	39
3.2	Indicators and scoring criteria of independent variables	41
4.1	Number and percentage of general demographic characteristics	44
4.2	Number and percentage of the family factors of elders	46
4.3	Number and percentage of elderly left behind	48
4.4	Number and percentage classified by elderly left behind and level of family relationship	49
4.5	Number and percentage classified by elderly left behind and level of family care	50
4.6	Number and percentage classified by elderly left behind and level of family violence	51
4.7	Number and percentage classified by elderly left behind and level of family communications	52
4.8	Number and percentage classified by elderly left behind and family income	53
4.9	Number and percentage classified by elderly left behind and household debt	54
4.10	Number and percentage classified by elderly left behind and family residence	55

**LIST OF TABLES (Cont.)**

<b>Table</b>		<b>Page</b>
4.11	Number and percentage classified by elderly left behind and number of intimate neighbors	56
4.12	Analysis of correlation between variables relating to the level of family relationship, level of family care, level of family violence, level of family communications and number of intimate neighbors, and the variable relating to the elderly left behind based on Spearman Rank Correlation Coefficient	59

## LIST OF CHARTS

<b>Chart</b>	<b>Page</b>
1.1 Percentage of diseases in elders, Year 2007	2
1.2 Percentage of elders classified by the characteristics of living, Year 1994, 2002 and 2007	4
5.1 Percentage of the level of family relationship and elderly left behind for 0 day a week	61
5.2 Percentage of the level of family relationship and elderly left behind for 7 day a week	61
5.3 Percentage of the level of family care and elderly left behind for 7 days a week	63
5.4 Percentage of the level of family violence and elderly left behind for 7 days a week	64
5.5 Percentage of the level of family communications and elderly left behind for 7 days a week	65
5.6 Percentage of the family income and elderly left behind for 5-6 days a week	67
5.7 Percentage of the family income and elderly left behind for 7 days a week	67
5.8 Percentage of household debts and elderly left behind for 5-6 days a week	68
5.9 Percentage of household debts and elderly left behind for 7 days a week	69
5.10 Percentage of the family residence and elderly left behind for 7 days a week	70

**LIST OF CHARTS (Cont.)**

<b>Chart</b>		<b>Page</b>
5.11	Percentage of the number of intimate neighbors and elderly left behind for 3-4 days a week	71
5.12	Percentage of the number of intimate neighbors and elderly left behind for 7 days a week	71

## CHAPTER I

### INTRODUCTION

#### 1.1 Background and rationale of the research

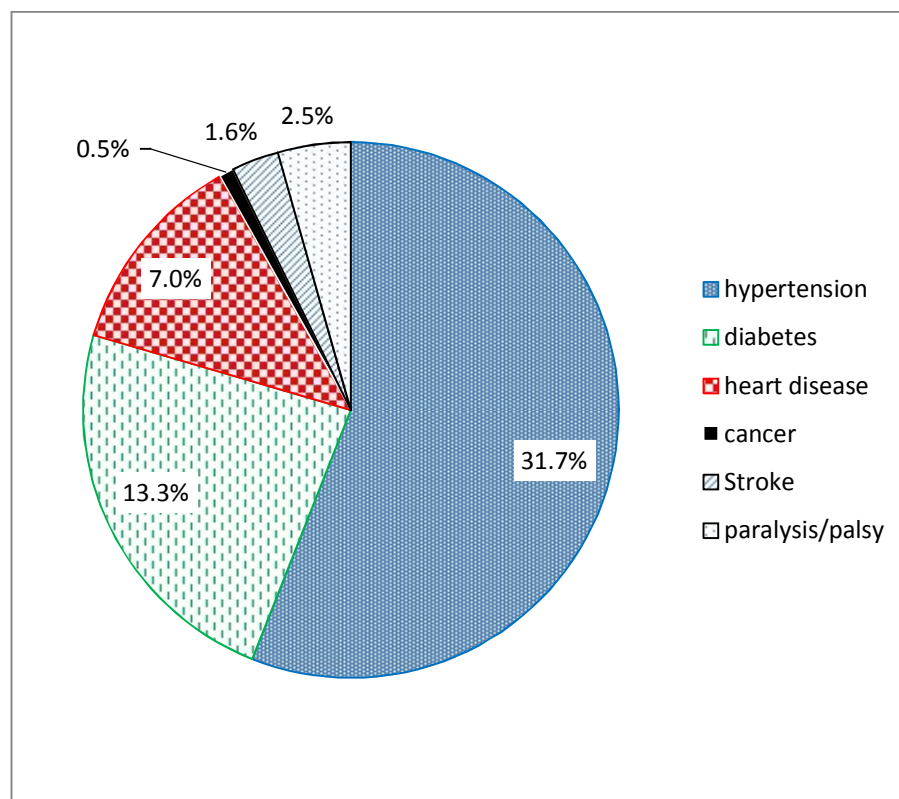
At present, Thailand is entering into the aging society since the number of aged people in Thailand has been increasing rapidly. The structure of population is gradually changing from children in the past to elders as evidenced by the changing proportion of elders from 5.4% in 1960 to 4.9% in 1970 and 6.3% in 1980. This shows the narrow range of changes only. However, the proportion of elders has increased at the high rate from Year 1980 to 2000 or from 6.3% in 1980 to 9.5% in 2000 (Bunlu Siripanich, Somsak Chunharas, Ladda Damrikarnlert, Varittha Kaewket, and Jutarat Tanunchai, 2010). In addition, the medical and technological advances have minimized or cured certain incurable or fatal diseases; this reduces the rate of mortality, and widens the range of ages (Siruen Kaewkangwan, 2006) as illustrated in table 1.1

**Table 1.1 Population census of Thailand, Year 1960-1990**

Year	Total populations	Number of populations older than 60 years	Percentage of populations older than 60 years
1960	26,257,916.00	1,506,000.00	5.4
1970	34,397,371.00	1,680,900.00	4.9
1980	44,824,540.00	2,912,000.00	6.3
1990	54,509,500.00	4,014,000.00	7.4
2000	60,916,441.00	5,792,970.00	9.5

Source: Data from Year 1960-2000 computed from Thailand's population census, Year 1960-1990, National Statistical Office

The increasing number of elders, adversely, causes other problems about the elders in the country since the old age is in a period of physical, psychological and social decline, which directly affect the daily activities of aged people although their physical changes occur naturally and inevitably. According to the 2007 Thailand Elder Survey by the National Statistical Office, nearly one-fourths of elders or 21.5% assessed that their health was bad and another 2.8% assessed that their health was so bad. Most informants of this survey were female, and there were older aged people than younger aged people (older than 80 years of age for 41.4%, 70-79 years of age for 29.9%, and 60-69 years of age for 18.4%). Among these aged people, 31.7% of them had the hypertension; 13.3% had the diabetes; 7.0% had the heart diseases; 0.5% had the cancer; 1.6% had the stroke; and 2.5% had the palsy and paralysis (National Statistical Office, 2007). This situation causes the mutualism, which leads to the caring problem as illustrated in chart 1.1

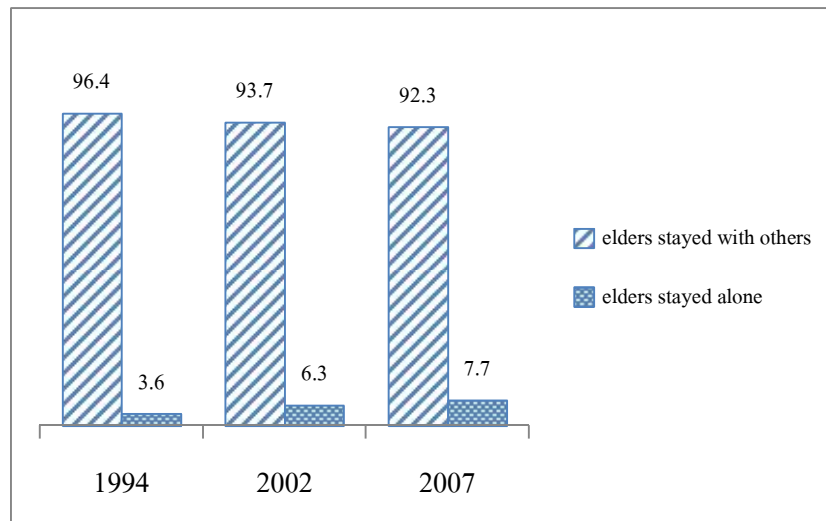


**Chart 1.1 Percentage of diseases in elders, Year 2007 (source: Thailand Elder Survey Report, 2007)**

For the psychological, economic and social problems, according to the study conducted by Uthaitip Rakjanyaban (2006) regarding the characteristics of family supports to the elders and the factors correlated with the family supports to the elders, it was found that most elders (82%) received the financial support; 77% received food and daily life supports; and 56% received the stuff support. Nevertheless, nearly a half of elders felt that they were not cared by the family members who provided all types of support to the elders. It was also found that the single elders, childless elders, and alone elders were the vulnerable groups receiving few family supports. The emotional and psychological supports to the elders must not be ignored. Thailand's policy focuses on care for the elders. The 11<sup>th</sup> National Economic and Social Development Plan, 2011 – 2016 focuses on the happy living with the elders who must have the immunity for any changes (Soontaree Puaves, 2012). Therefore, the family and community must be the strong core institutes providing the quality supports to the elders.

Family is a vital social supportive institute that is closest to the elders in respect with their physical body and mind. The family offers love, warmth, safety and reliance for the elders. Therefore, it is necessary that the elders are cared by the family, or anyone must be assigned to take care of health of the elders, to take them to see the doctor, and to offer warmth and psychological care to them. At present, the demographic, economic and social changes of Thailand cause higher tendency of elderly left behind. The National Committee on Family Development and Eradication of Violence against Children and Women (1999) found that more elders have been left to stay alone because of the families' inability to care for them or leave the difficult elders behind, especially poor, sick or disabled elders. In addition, many aged people in rural areas were left behind to rear the grandchildren whose parents earned for living in other areas. These aged people had more suffering when they did not get sufficient money for living and rearing the grandchildren, or, sometimes, they could not earn for living. Thailand Elder Survey in 2007 shows this change, that is, the proportion of alone elders tended to be higher. In 1994, only 3.6% of elders stayed alone. In 2002, this proportion hiked to 6.3%. Most recently, in 2007, this group of elders reached 7.7%. Among all elders, about 12% of them were the home-bound and bed-bound elders or they may be called "dependent elderly" who needed the

caregivers for their daily activities. For this group, 1.1% of them were cared by none. In caring for elders, 2.2% were the elders at age more than 80 years who had to take care for other elders (National Statistical Office, 2007), which is the overloaded burden for their physical body and mind as illustrated in chart 1.2



**Chart 1.2 Percentage of elders classified by the characteristics of living, Year 1994, 2002 and 2007**

For the elderly left behind, the World Health Organization (cited in Bureau of Empowerment for Older Persons, Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups, and Ministry of Social Development and Human Security, 2012b) indicates that it is a type of abuse against the elderly, which may be classified in 8 types: 1) physical abuse; 2) psychological abuse; 3) sexual abuse; 4) financial abuse; 5) right abuse; 6) self-abuse; 7) ignorance for any necessary care; and 8) neglect. Type 7 and 8 are the violence caused by leaving the elderly behind.

Such changes, including smaller family size, immigration, modernity and more urbanization, all affect the quantity and quality of caring for aged people in the family. This research studied the family factors and their influence toward the elderly left behind in Thailand in order to obtain the guideline for further studies on self-care and self-dependence of the elderly, and to root the conscious mind of family care and support so that the society is prepared to enter into the aging society appropriately.

## **1.2 Objectives of the research**

To study the family factors and their influence toward the elderly left behind in Thailand.

## **1.3 Hypotheses**

The family factors of the elderly included the following aspects: family relationship, e.g. level of family relationship, level of family care, level of family violence, and level of family communications; family economy, e.g. family income and household debt; and community, e.g. family residence and number of intimate neighbors. These all affected the elderly left behind.

## **1.4 Sample group**

This research relied on the secondary data from the project on happiness situation of Thai families in 2011 undertaken by Thai Family Studies Association in collaboration with certain academics of the National Institute for Child and Family Development, Mahidol University. The research inquired the samples totaling 4,000 persons who were family representatives. In this research, the Researcher focused on the family factors and their influence toward the elderly left behind in Thailand. The sample group of this research involved at least one family member, Thai, at age of 60 or more, living in the northern region, northeastern region, central region, southern region, and in Bangkok and its vicinity in the total of 1,565 elders.

## 1.5 Variables of the research

**Independent variable** was the family factors, which were divided into 3 aspects:

- 1) Family relationship, e.g. level of family relationship, level of family care, level of family violence, and level of family communications.
- 2) Economy, e.g. family income and household debt.
- 3) Community, e.g. family residence, and number of intimate neighbors.

**Dependent variable** was the elderly left behind.

## 1.6 Definitions

1) **Elder** means a person at age of 60 and up, living in Thailand in the northern region, northeastern region, central region, southern region, and in Bangkok and its vicinity.

2) **Family factors** mean the family compositions, divided into:

### 2.1) Family relationship

2.1.1) **Level of family relationship** means the relationship between family members. This issue was stated in the question that, “Which level of family relationship your family has now?” The scoring criterion consists of 4 levels: not good, fair, quite good, and best.

2.1.2) **Level of family care** means the family members pay attention to happiness and sorrow of each other. This issue was stated in the question that, “Which level of family care your family has now?” The scoring criterion consists of 5 levels: least real, slightly real, moderately real, and most real.

2.1.3) **Level of family violence** means the family members harm and hit other members. This issue was stated in the question that, “Which level of family harming and hitting to other members your family has now?” The scoring criterion consists of 5 levels: least real, slightly real, moderately real, so real and most real.

**2.1.4) Level of family communications** means the family members have talks and discussion to solve family problems. This issue was stated in the question that, “Which level your family has talks and discussion now?” The scoring criterion consists of 5 levels: least real, slightly real, moderately real, so real and most real.

## **2.2) Economy**

**2.2.1) Family income** means the economic situation of the family regarding the income adequacy. This issue was stated in the question that, “Which is the economic situation of your family (income) now, adequate or inadequate income?”

**2.2.2) Household debt** means the economic situation of the family regarding the debt. This issue was stated in the question that, “Which is the economic situation of your household (debt) now, out-of-debt, some debts and many debts?”

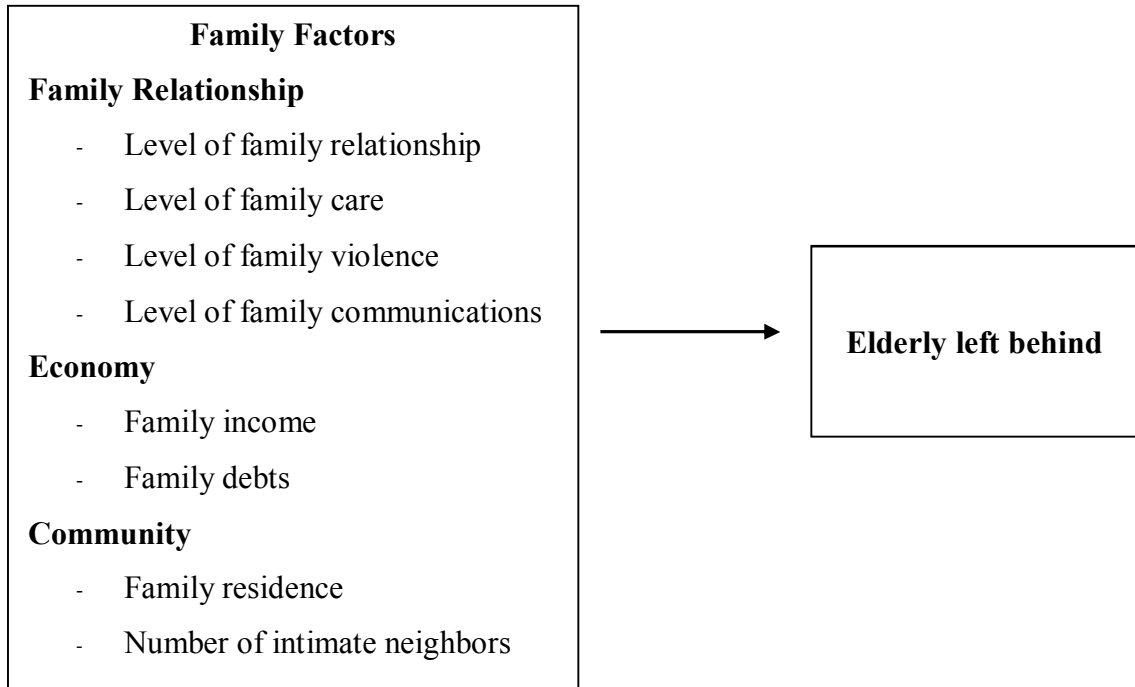
## **2.3) Community**

**2.3.1) Family residence** means the living zone of populations. This issue was stated in the question that, “In which zone your family lives now, urban or rural?”

**2.3.2) Number of intimate neighbors** means the community or village where you lived and you had certain intimate neighbors (not relatives or village head) to which your family members might ask for advice or assistance comfortably. This issue was stated in the question that, “How many families in your community or village where you lived and you had certain intimate neighbors (not relatives or village head) to which your family members might ask for advice or assistance comfortably?” There were 5 alternative answers for this question: none, 1 family, 2 families, 3 families, and 4 families.

**3) Leave behind** means the assessment by the elders’ families leaving the elderly behind to stay alone. The scoring criterion was divided into 5 levels: least real (0 day/week), slight real (1-2 days/week), moderately real (3-4 days/week), so real (5-6 days/week), and most real (7 days/week).

## 1.7 Conceptual framework



## **CHAPTER II**

### **LITERATURE REVIEWS**

This research is to study the family factors and their influence toward the elderly left behind in Thailand. The research relied on the data from the project on happiness situation of Thai families in 2011 and 2012. The following concepts, theories and studies were reviewed for this research:

2.1 Basic concepts about elders

2.2 Roles of the family and family violence against elders

2.3 Types of living of elders

2.4 Policy of caring for Thai elders

2.5 Related research studies

2.6 Theories and research relating to elders and selection of questions from the questionnaire

### **2.1 Basic concepts about elders**

#### **2.1.1 Elderly**

The United Nations (cited in Puangthong Kraipiboon, 2010) defines the “elderly” as populations, both male and female, at age of 60 and up by counting the age of birth. However, the World Health Organization has not yet defined the term of elderly by giving a reason that many countries around the world define the term of elderly differently up to the age of birth, social aspect, culture and functional markers.

For Thailand, Puenjai Rattakorn (1997) concluded that this age is the last stage of life. Aging does not mean any disease or illness, but life development that is changing to the physical and psychological decline. It is difficult to fix when this age starts and ends. Generally, this age starts at the age of 60. According to the Act on the

Elderly B.E. 2546 defines the elderly as persons who have attained the age above complete sixty years (Ministry of Social Development and Human Security, 2010).

Kohli (cited in Harry and Jennifer, 2012) divides the range of aging based on the retirement: 65-74 years (The young-old), 75-84 years (The old-old), and 85 years and up (The oldest-old). Sriruen divided the aging into 4 ranges based on the psychosocial-biological characteristic: 60-69 years (The young-old), 70-79 years (The middle-age old), 80-90 years (The old-old), and 90-99 years (The very old-old) (Sriruen Kaewkangwan, 2006).

This can be concluded that the term of elderly is defined by the physical, psychological, social and cultural changes. The range of aging is different in each society and country. But, generally, the aging starts at the age above 60 years.

### **2.1.2 The concept of age**

**1) Chronological Age** refers to the number of years that have elapsed since a person's birth. Chronological age is only a rough index of psychological or biological development. A person's chronological age in and of itself does not cause development. Age is merely a crude marker for the processes that influence behavior over time.

**2) Biological Age** involves measuring the status of an individual's vitality or neurobiological health. An individual's biological capacities may differ from those of other persons of the same chronological age. Measures of neuroplasticity, maximum cognitive reserve capacity, and health span can be used to index developmental changes in biological status.

#### **2.1) Body Changes**

The physical manifestation of aging involves the appearance of the skin facial wrinkles and age spots. Facial structure also changes with age. The cartilage in the nose and ears continues to grow, although the bone of the face do not enlarge after young adulthood. Height decreases by about a half inch between ages 30 and 50 and by another one inches between ages 25 and 75. These changes in height are associated with postural changes, compression of the cartilage in the spine, and loss of bone density with age. Loss of bone density occurs at a faster rate for women after menopause.

## **2.2) Changes in Circulation and Respiration**

One of most noteworthy decline occurs in the circulatory system. The cell in the human body, to survive and function, must receive oxygen and nutrients and must have a way to dispose of waste products. The circulatory system interacts with the respiratory system. Oxygen, delivered to the body cells via the blood, enters the bloodstream in the lungs. Starting at about age 30, maximum oxygen capacity in the lungs decreases by about 5 to 10 percent per decade. Furthermore, collagen fibers begin to build up in the lungs, causing the lung tissue to lose its elasticity.

## **2.3) Changes in Hormone Regulation and Reproduction**

The machinery of the endocrine system gradually becomes less productive in aging men and women. Age-related changes in hormonal regulation occur due to changes in secretion patterns and their effects on target tissues. The reproductive system of men and women undergoes hormonal change with aging.

## **2.4) Sensory and Perceptual Processes**

Five primary senses are vision, hearing, touch, taste, and smell. Sensation refers to the reception of information by the ears, skin, tongue, nostrils, eyes, and other specialized sense organs. Sensory processes are closely connected to higher-level perceptual and memory processes, and there is some evidence to suggest that higher-order brain system associated with perception, attention, and memory serve to compensate for age-related reductions in basic sensory processing.

## **2.5) Brain aging**

Brain aging is a collection or cascade of many universal biologically-based processes. These processes gradually, but inevitably, alter the neurochemistry of cells and molecules, neuro-anatomical structures and their functioning, and biogenetic interactions. Age-related changes in the brain and central nervous system have dramatic effects on the behavioral, cognitive, and personality functioning of the aging individual. Brain aging takes place on many levels, from mitochondria to gross anatomy.

**3) Psychological Age** refers to an individual's adaptive capacities-the ability to adapt to changing environmental demands. Individuals adapt to their environments by drawing on various psychological characteristics: learning, memory,

intelligence, emotional control, motivational strengths, coping styles, and so on. Individuals who show substantial strengths in regard to these characteristics fall on the “young” end of this scale; those who possess such traits to a lesser degree would be nearer to “old” end of this scale.

**4) Social Age** refers to the social roles and expectations people hold for themselves as well as those others impose on them. Furthermore, individuals are often keenly aware of being on-time or off-time with regard to their own “social clock” and the age-graded expectations of peers or family. Age-defined social norms are presumably more relaxed now than just a decade ago. (Hoyer & Roodin, 2009)

## **2.2 Roles of the family and family violence against elders**

### **2.2.1 Family roles to the elderly**

Family is a group of persons who are attached and live together. Family acts as a core and vital institute for living. There are several family types and characteristics apart from the nucleus family comprising the parents and children.

#### **1) Importance of the family**

The National Committee on Family Development and Eradication of Violence against Children and Women (National Committee on Family Development and Eradication of Violence against Children and Women, 1999) defines the importance of the family as follows:

1.1) Family is the first basic institute of humans. It is also the oldest institute in the world to perform duties of cultivating human being in any new family members, e.g. infant and child.

1.2) Nurture and education by the family put influence on the individual quality and personality as well as value, attitude and behavior of children and youth. The way of life of family members puts influence to each other.

1.3) Family is the basic social institute involving the way of life of every family member. The way of life includes the economic, social political,

educational, art and cultural and moral aspects, which result to the quality of the society.

1.4) Family is the smallest economic unit and the social basic unit. Some families may be the direct production unit in the economic system.

1.5) Family, community, society and environment take effect to each other, and each experiences the continuous evolution and changes, which result to the individuals' behavior.

1.6) Several social problems could be avoided by the family institute that forms the group to be the group/community power to improve, prevent and solve its problems (Office of Women's Affairs and Family development, 2007).

## **2) Family care to the elderly**

The parental roles to children is the cycle of life to be done by every human. When a child grows up, is educated, earns for living, and gets married, the parents continue selecting the good spouse for their child. The parental roles have never ended whenever the parents are still alive. When the parents become the elderly; this deems the end of parental duties to the children whereas the family members must care for the elderly instead.

Thaveesak Laphukiaw (2003) studied the family care to the elderly living in the municipality, Tambon Nong Hin, King Amphoe Nong Hin, Loei Province. He found that the elderly received the family care in general and in each aspect at the fair level. The elderly with different age, occupation, level of education, and social status received the different family care at the statistical significance.

Panee Somtes (2007) studied the elder care at the family in Khon Khen. She found that the elder care at the family level in respect with physical body, psycho-sociology and economy, in general, between the family heads' practice and elders' opinions were different at the statistical significance.

The elder care must be done in the long term that covers all social, health, economic and environmental domains. For the difficult elderly due to chronic diseases or disabilities until they are partially able to do their daily activities or they are wholly unable to do their daily activities; so they need formal caregivers (health and social personnel) or informal caregivers (family, friend, neighbor) as well as services in the family, community or service center (resolution of the Health Assembly, 2009).

### **3) Factors relating to the family abilities to the elderly**

To what extent each family is able to care for the elderly depends on several factors. Sasipat Yodpetch (2001) mentioned about the factors relating to the family's abilities in the elder care as listed below.

3.1) Family structure – A family with few family members usually engages the small care network. The family members who are single, widowed or divorced usually lack the caregiver like the families or persons living alone and far from neighbors.

3.2) Core family caregiver – The elder's declining health takes effect to their living and activities done with other persons. The health problems force the elderly to rely on other persons, and to change the relationship with the family members due to expenses for care, medical treatment, and lack of privacy for the caregiver. Several studies specify that the child is the important caregiver. The child gives care to the elderly, earns for living, and gives the emotional, psychological and social supports to the elderly. In any family where the child must care for the sick elder, such duties and roles of the child will be reducing or lost. Thus, each family should promote and develop the skills of creating the good relationship and living with other family members.

3.3) Separation, divorce and widowhood – At present, the number and proportion of elderly in Thailand have been increasing constantly. Adversely, the number and proportion of children and reproductive populations have been decreasing. As a result, the care and assistance to the elderly are the spouse's duties. But, in case of separation, divorce and widowhood together with decreasing care by children, the elderly who no longer receive any supports would not be able to help themselves. This causes the elderly to receive more help from various institutes.

3.4) Women's working – It is widely accepted that the child takes an important role in caring for the elderly, especially the daughter who is at the working age, must earn for living to get the income for the family, and bear the expenses for the elderly. The working affects the woman as the child when she is unable to care for the elderly completely, and it also results to her working as the manpower.

3.5) Critical illness of any family member – The illness of any family members, especially those in charge of caring for the elderly definitely reduces the emotional, psychological and social supports to the elderly or such care may not complete. In case that the young caregivers have certain dreadful diseases such as HIV, the elderly may become the caregiver to such HIV or AIDs child. It deems that the family member's illness with dreadful disease greatly challenges the caregiver because it affects the potential in caring for the elderly.

#### **4) Elder problems in the family**

The National Committee on Family Development and Eradication of Violence against Children and Women (1999) summarized the problems about elderly in the family as follows:

4.1) Due to the increasing number of nucleus family, the elders have fewer roles in helping the family affairs. As a result, the society ignores the elders' importance until the elders feel that they are not important and left behind.

4.2) More elders are abandoned to live alone because the families may be unable to care for them or they deny caring for the difficult elderly, especially poor, sick or disabled elders.

4.3) A lot of elderly in rural areas are abandoned to rear their grandchildren since the parents must earn for living in other areas. These elders confront more difficulties when they do not receive the sufficient money for their own living and rearing the grandchildren or they may be unable to earn for living.

4.4) The family members have no knowledge and understanding in the elders' needs or the elderly may lack the knowledge and understanding in their adaptation.

4.5) There are more female elderly. The elderly, either male or female, are not prepared to be the elderly such as self-help or alone elderly, etc.

The aforesaid factors are the important problems affecting the elderly. According to the research project on finance for the long-term care for the elderly in Bangkok and other regions involving 160,000 elders, it was found that 90% had the least dependence while 5.4% had the high dependence or wholly relied on other persons. The elderly in urban areas and Bangkok were more likely to use the care service from outsiders and care service centers. About 45% of elderly needed

little dependence and lived alone while 41% were capable of hiring the caregiver or were cared by the family member. There were only 4% of elderly who needed the high dependence and were cared by the family member. This shows that, at present, the families gave less care to the elderly (Academic Center, Thai Health Promotion Foundation, 2010).

### **2.2.2 Family violence against the elderly**

Elder violence causes the elderly to have physical, psychological, emotional, and health pain, danger or sorrow. The elder violence includes the right abuse, exploitation or leave elder behind. The actions defined as violence against the elderly must include the following elements.

The World Health Organization (cited in Bureau of Empowerment for Older Persons et al., 2012) classified the elder abuse as follows:

1) Physical abuse – The elders are hurt or injured by various methods, e.g. slapping, hitting, tying and giving excessive medication.

2) Psychological abuse – This is to show various behaviors to the elderly, e.g. aggressive words, blaming, humiliating, ignoring and silence. These actions are done together with other types of abuse.

3) Sexual abuse – This is to take part in any sexual activity without the elder's consent.

4) Financial abuse – This is to show the intention to grab some properties or money, or to exploit the property improperly, to take some money without the elder's consent or to possess the property, and to counterfeit documents.

5) Right abuse – This is another elder abuse, e.g. forcing the elder to do what he/she denies, sending the elder to the elder care home, etc. This causes the elderly to lose their privacy, and physical and psychological freedom.

6) Self-abuse, e.g. refusing any care or help, not taking any food and medicine, wearing improper clothes, and tending to commit suicide.

7) Ignorance – The caregiver ignores the necessary care.

8) Neglect, which may be classified into 3 types:

8.1) Physical neglect, e.g. neglect of clothes, movements, hygiene, and safety. The elder may not be cared or he/she rejects any care.

8.2) Medical neglect – The elder does not receive the medical treatment since the caregiver may claim that the elder's abnormalities are caused by his/her aging. This abuse usually comes along with other physical abuse.

8.3) Emotional and psychological neglect, e.g. no efficient communications, shouting or talking too loud, leaving the elder to get the odor or noise he/she dislikes.

The Committee on Women, Youth, and the Elderly Affairs, Senate (2003) summarized the types of elder abuse as follows:

1) Physical abuse – Various forms of physical harm to cause pain and injuries, e.g. hitting, pushing, pitching, biting, pecking, sexual abuse (means the physical or verbal abuse, any acts relating to sex against the elder normality up to the rape), detaining, imprisonment, slapping, pushing, shaking and threatening with any weapon.

2) Psychological abuse – The actions to make the elderly feel hurt, fearful, lonely, ashamed, be humiliated, ridiculed by using the aggressive and rude wording, blame, threaten, and treat the elderly like small children, accuse them, look down on their abilities, call their names without paying respect, block them to meet friends, relatives, intimate persons, and do other actions hurting the elders' mental peace.

3) Material abuse or financial abuse – Illegal or unauthorized use of the elder's property such as financial abuse, improper or unauthorized use of property of the elderly, possession of property of the elderly, stealing some money or valuable belongings, forcing the elderly to change their will or documents in connection with property, depriving the elderly of rights in caring or managing their own property.

4) Violation of right – Forcing the elder to do or not to do what he/she does not want such as sending him/her to the elderly care center, which opposes to his/her demand.

5) Self-abuse – Most causes of self-abuse are the elders' diseases such as dementia, depression in the elderly, wrong attitude, receipt of incorrect information, disappointment to their descendants; so the elders ignore their health like rejection to food and medicine resulted by the elder's emotional problem or misunderstanding that the descendants do not love or care for him/her. Self-abuse involves the suicide as well.

6) Neglect – This is the impairment of providing necessary factors for physical and psychological survival. There are 2 types of neglects:

6.1) Active neglect – The elder's physical and psychological needs are not responded fully; for example, rejection to care or giving the bad care, no provision of meals causing the elder confronting the dehydration and malnutrition, giving too many sleeping pill, no provision of eyeglasses, denture, earpiece or walking aid, leaving the elder to stay alone so long, elder abandonment, not taking the elder to join any social activities until he/she has the mental pressure.

6.2) Passive neglect – This is caused by no experience or knowledge/skills; for example, the caregiver has no knowledge about elder care, or provides the improper food for any disease the elder may have, or forgets to do anything the elder asks for.

From classifying the elder abuse, the elderly left behind is an important type of abuse, which may impair four requisites for both physical and psychological survivals that may lead to other types of abuse. The environments that do not support the living, and restrict the elderly obstruct them to have the convenience based on their needs or necessities.

From the data analysis of Thailand Elder Survey in 2007, it presents some dynamics that the proportion of elderly living alone tended to be higher. In 1994, only 3.6% of the elderly lived alone. But, the proportion hiked to 6.3% in 2002. Most recently, in 2007, 7.7% of the elderly lived alone while another 92.3% did not live alone. From all elders, 12% of them were the home-bound and bed-bound elders or they may be called “dependent elderly” who needed the caregivers for their daily activities. For this group, 1.1% of them were cared by none. In caring for elders, 2.2% were the elders at age more than 80 years who had to take care for other elders (National Statistical Office, 2007), which is the overloaded burden for their physical body and mind.

The elder abuse definitely and greatly affects the elders' physical body and mind. It is apparent that the family is important for the elderly in respect with care and abuse. Therefore, the solution to the elder abuse must start at the family. The precise solution in the Thai society is ignored due to the ambiguity and no understanding; as a

result, these problems have never been prevented or solved appropriately. It is likely that there will be more problems of elder abuse and they will become more severe.

### **2.3 Types of living of elders**

The elders' living is different from people at other ages due to the decline of physical fitness and illness. The arrangement of environment and dwelling to care for and protect the elders from diseases and accidents, as well as other necessary services are necessary in order to promote the quality of life of the elderly, and to prolong the elder's life as long as possible under the physical arrangement and participation of the family, community and society.

The physical living condition of house reflects the quality of life of populations. Living in the hygienic condition under international standards is the basic need to be served. It is accepted that the elders want the different living condition from general people due to the restricted body movements when they get older.

Bunlu Siripanich (2002) summarized the preparation of dwelling for the elders' happiness at their final span of life as follows:

- 1) Location – Several factors should be concerned, e.g. relative, friend, nearby community and service place.
- 2) Size of house – It should be suitable for the aging life.
- 3) House layout and facilities – For example, a house with several floors and walking up/down the stairs is not suitable for the elder.
- 4) House care – Who cares for the house and the garden? Are the expenses in the house care sufficient?

The Ministry of Interior requires 7 basic facilities in buildings for disabled and elderly in 2005 to be the guideline of providing the suitable and safe environments for the elderly (cited in The Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups, and Ministry of Social Development and Human Security, 2012a) as follows:

1) Improving the environments in toilet or restroom so that it is not slippery, has no barrier, but some hand rails are equipped. The necessary facilities are placed to be picked up conveniently.

2) Fixing the hand rails to support the body/ to prevent the falling from stairs, in the toilet, bedroom, walkway in the house or walking street in public places, etc.

3) Making the ramp with hand rails to give more safety to the elderly in any service center, temple, market, office building, etc.

4) Slide door or door that can be opened outside to help the elderly struck inside.

5) Installing the alarm in the toilet or bedroom for the elderly in any emergency case.

6) Parking for the elderly should be near to the office entrance, and some space is spared for opening/closing the car door.

7) Providing the information service for the elderly.

For the living condition of Thai elderly, the National Statistical Office, 2002 (cited in the National Commission on Elder Promotion and Coordination, The Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups, and Ministry of Social Development and Human Security, 2004) summarized the key issues as described below.

Many Thai elderly had the improper dwelling. Although most of them (86%) lived in the single houses, commercial buildings and townhouses, almost half of them lived in the single houses where the ground is raised high. In the rural areas, the percentage of elderly living in the highly-raised house was greatly higher than those in the urban areas. The elderly living in townhouses and commercial buildings were more found in the urban areas. The elderly living in highly-raised houses and sleeping upstairs were more risky to the accidents.

**Table 2.1 Residence characteristics of Thai elders (60 years of age up), Year 2002**

<b>Characteristics of Residence</b>	<b>Total</b>	<b>Urban</b>	<b>Rural</b>	<b>% of sleeping on the first floor</b>
Total	100	100	100	47.8
Highly-raised single house	42.4	24.8	50.3	24.0
Generally-raised single house	46.0	44.0	46.9	70.3
Townhouse	4.0	9.8	1.3	46.5
Commercial building	7.0	20.0	1.1	45.3
Others	0.7	1.4	0.4	41.6

Source: Thailand Elder Survey, 2004

As Thailand is entering into the aging society, it shows certain dynamics of population structure in both urban and rural areas. Therefore, it is necessary that there should be some preparations for the increasing number of elderly, as well as for the residence so that the elderly live in the familiar environments, feel safe there, have self-dependence in the daily life, and access to the public service system. In Thailand, a plenty of elderly still have the improper living conditions, which cause accidents resulting to injuries or death.

## **2.4 Policy of caring for Thai elders**

At present, the population structure has been changing, that is, the young-age populations have been decreasing. It is likely that Thailand will enter into the aging society at the high speed. Thailand is moving into the stage called “population ageing”, which takes effect to the economic and social conditions. The Thai Government should concern about this issue, and prepare some measures, especially health care and promotion of the good quality of life for the elderly. The elderly should be also protected, and able to access the fundamental services for their living. The essences of all related plans and policies are as follows (Soontaree Puaves, 2012):

**1) The National Plan on the Elderly (2002-2021),** amended No. 1, 2009, has significant issues as listed below.

1.1) Good quality elderly – The elderly have the good physical and psychological health, happy family, and sympathy society. They also live in the suitable, safe and secure environments, receive the suitable welfare and services, live under self-esteem, prestige, self-dependence, are the mental coherence, participate in the family, community and society, and have chance to access the information constantly.

1.2) Family and community are main strong institutes to give the quality supports to the elderly.

1.3) Welfare and service systems must allow the elderly to live with their family and community under good quality and standards.

1.4) All related sectors must be involved in providing the welfare and service systems to the elderly while the elderly are protected and cared as consumers.

1.5) There must be appropriate actions to help the elderly who are poor and want some good and constant supports to live in their communities.

There are also 5 strategic issues as listed below.

Strategy 1: Strategy on the preparation of quality ageing population, which includes the income security for the elderly, provision of education and life-long learning, and arousing the public awareness to recognize the value and prestige of the elderly.

Strategy 2: Strategy on the elder promotion and development, which involves the health promotion, prevention of illness and initial care, promotion of group formation and strengthening the elder organizations, promotion of elder working and income earning, support for potential elderly, promotion to all types of media to produce programs for the elderly, support to the elderly to receive the knowledge and to access the information and media, and promotion and support to the elderly to have the suitable dwelling and environments.

Strategy 3: Strategy on social protection system for the elderly, which involve the income protection, security in respect with health, family care, caregiver and protection, and service system and supportive network.

Strategy 4: Strategy on management for the development of elder affairs, which involves the national integrated management for the development of elder affairs, and promotion and support for personnel development in respect with the elderly.

Strategy 5: Strategy on assessment, development and dissemination of knowledge base about the elderly, which involves the support and promotion for research, and the development of knowledge base about the elderly in order to formulate the policies and the development of services or other actions useful for the elderly, constant and standard monitoring and evaluation of performance according to the National Plan for the Elderly, and the development of accurate and updated information system relating to the elderly under the information system easily accessed and searched.

**2) Act on the Elderly B.E. 2546 Z2003) and Act on the Elderly, Issue 2 B.E. 2553 (2010)** were enacted to boost the effectiveness of working about protection, promotion and supports to the right and benefits of the elderly. For example, Section 11 specifies that the elderly shall have right to access the following protection, promotion and support: medical and public health services particularly provided by taking account of convenience and rapidness for the elderly; education, religions and useful information and news for their living; appropriate occupations or occupational training; self-development and participation in social activities, grouping together as a network or community; facilities and safety directly rendered to the elderly in buildings, places, vehicles or other public services; appropriate support for transport fares; exemption from entry fees to government places; assistance for any elderly person facing danger of torture or unlawful exploitation or abandonment; provision of advice and consultation on other proceedings in connection with a case or the remedy of family problems; extensive provision of housing, food and clothing where necessary; extensive and fair provision of monthly old-age pension; assistance in holding their traditional funerals, etc.

**3) Policies of the Government and the Council of Ministers** – Prime Minister Yingluck Shinawatra declared the government policies to the parliament on Monday, 23 August 2011, and the Council of Ministers formulated the administrative policies. In this regard, the elder policies include: escalation provision of monthly old-age pension, that is, Baht 600 per month for the elderly at ages of 60-69 years, Baht 700 per month for the elderly at ages of 70-79 years, Baht 800 per month for the elderly at ages of 80-89 years, and Baht 1,000 per month for the elderly at ages more than 90 years; supports for the establishment of the center lifting the quality of life of elderly and disabled so that these people access any available services under prestige, quality and fairness; supports for better quality of life of elderly, disabled and vulnerable people by providing public facilities for the elderly and disabled; preparation for the aging society, development of health services, provision of supports, education and welfare, and encouraging the elderly to jointly drive out the society under a concept that the elderly have engaged high experience, it deems appropriate that they are involved in the national development.

## **2.5 Related research studies**

### **2.5.1 Research in Thailand**

Sirinya Kaikaew and Chamaiporn Kanchanakitsakul (2010) studied the Factors Influencing Happiness of Thai Elderly Living Alone. They found that over a half of Thai elderly (57.9%) living alone had happiness at the high level. The factors influencing happiness of Thai elderly living alone included the region, occupation, level of following the religious teaching, physical health and psychological health. The elderly living in the northeastern region had less happiness than those living in Bangkok. The elderly in occupations of officer, private employee, civil servant, state enterprise officer had less happiness than the elderly who had no occupation. In addition, the elderly who followed the religious teachings with good physical and psychological health felt happier. However, the gender, age, marital status, highest

education attained, administrative zone and time contribution by family members did not put influence on the happiness of elderly living alone.

Sophia Awae (2003) studied the Dwelling Types of the Elderly, and Living Conditions of the Elderly Living Alone without any Labor-age Adults in the Residence in the Kanchanaburi Project. The results showed that the elderly needed certain fundamental factors in respect with physical body, mind and finance. Most assistance sources for the elders' survival came from their descendents, relatives and community. It was found that although the elderly in the Kanchanaburi project lived alone, they were not left behind because, in the Thai society, the elderly still had the descendents and relatives who paid respect and gave assistance while the community offered sympathy to each other.

Suriyaporn Intraprom, Chavapornpan Chanprasit and Tassana Choowat hanapakorn (2008) studied self-care of the elderly living alone at Surat Thani Province. The results showed that the elderly living alone defined self-care in 2 aspects: care for physical and psychological health; and self-dependence while seeking for help. The care for physical and psychological health came from the awareness of changes from ageing. These elderly performed the following activities: observing any physical irregularities, being careful for food, doing exercises, relaxation, and applying the Buddhist teachings in their living. The meanings of self-dependence and seeking for help derived from the acceptance to alone living, and the perception of body functioning abilities.

Pornthip Malatham, Jiraporn Kong-iam and Prakong Intrasonbat (2009) studied the relationship between family supports and peer supports and life satisfaction in the elderly living in rural areas. The results showed that the family supports to the elderly, and the elders' perception of family supports were at the high level. But, the elders' perception of peer supports and life satisfaction were at the medium level. In addition, the elders' perception of family supports and peer supports were positively correlated with the elders' life satisfaction at the statistical significance. However, the supports to the elderly according to the family perception were not correlated with the family supports according to the elders' perception or life satisfaction at the statistical significance.

Lek Sombat (2006) studied the project on the current family situation in elder care. The results showed that the families and elderly were facing the rapidly changing society that inevitably affected the families. What the families and elderly should perform for each other was to retain the good relationship in the family by adhering to the tradition and gratitude. The families and elderly had to rely on some help from external factors, e.g. supports by government entities, private sector, neighbors, community leader and religion to share the families' burden in caring for the elderly. Therefore, most families insisted that they were still able to care for the elderly, and the family members jointly arranged the care for the elderly. Meanwhile, the elderly accepted that the family care had to be changed according to the social condition. However, the elderly were still confident that they would be cared by the family, especially when they got sick or were unable to help themselves.

Uthaitip Rakchanyaban (2006) studied the characteristics of family supports received by the elderly, and the factors correlated with the family supports to the elderly. The results showed that most elderly (82%) got the financial support; 77% got the food and daily care support; and 56% got the stuff support. However, nearly a half of elders felt that they were not cared by the family members who provided all types of support to the elders. Most of caregivers were the child and spouse who lived with the elderly, except the financial supporters who might or might not live in the same house with the elderly in the similar proportion. The factors correlated with the receipt of all types of support were the residence, age, gender, marital status, income, level of education, working of the elderly, number of alive children, dwelling and disabilities of the elderly. It was also found that the single elders, childless elders, and alone elders were the vulnerable groups receiving few family supports, which should be supported by any related sectors. The emotional and psychological supports to the elders must not be ignored.

### **2.5.2 Foreign research**

Ramice (2011) studied "The effect of loneliness on malnutrition in elderly population" found that the average age was 75.4 +/- 6.2 years in subject group, while the same in the control group was 74.9 +/- 5.6 years. In subject group significantly more patients are on the verge of poverty. There are significant differences in the

classification of financial status, according to the groups ( $p = 0.043$ ). Members of subject groups have significantly lower BMI categories ( $p = 0.03$ ) compared with the control group. In our study, people who live alone are at increased risk of malnutrition ( $p = 0.030$ ), have reduced the number of daily meals, significantly lower daily intake of protein, fruits and vegetables in the diet in relation to persons living in a family environment. Significantly, more patients with loss of appetite lived alone.

Buchman et al. (2010) studied “Loneliness and the rate of motor decline in old age: the Rush Memory and Aging Project, a community-based cohort study” showed that the level of loneliness at baseline was associated with the rate of motor decline (Estimate, -0.016; S.E. 0.006,  $p = 0.005$ ). For each 1-point higher level of loneliness at baseline, motor decline was 40% more rapid; this effect was similar to the rate of motor decline observed in an average participant 4 years older at baseline. Furthermore, this amount of motor decline per year was associated with about a 50% increased risk of death. When terms for both feeling alone (loneliness) and being alone were considered together in a single model, both were relatively independent predictors of motor decline. The association between loneliness and motor decline persisted even after controlling for depressive symptoms, cognition, physical and cognitive activities, chronic conditions, as well as baseline disability or a history of stroke or Parkinson's disease.

Oswald, Wahl, Schilling and Iwarsson (2007) studied “Housing-related control beliefs and independence in activities of daily living in very old age” found that correlations showed small to medium relationships between accessibility, housing-related control beliefs, and ADL independence. Further, multi-group structural equation modelling revealed that not only housing accessibility but housing-related control beliefs explain unique portions of variation in the independent performance of daily activities. In particular, participants with lower external control beliefs performed more independently in ADL.

Abe, Fujise, Fukunaga, Nakagawa and Ikeda (2012) studied “Comparisons of the prevalence of and risk factors for elderly depression between urban and rural populations in Japan” found that Depressive symptoms were associated with living alone, being unemployed, chronic illness, sleep disturbance, suicidal ideation, financial strain, and poor social support; the risk factors for elderly depression were

almost the same in the two areas. Although three factors (financial strain, work status, and PGC-MS) were significantly associated with depression in both areas on logistic regression analysis, sleep disturbance was significant only for the urban area, and poor social support was significant only for the rural area.

Arai, Katsumata, Konno and Tamashiro (2004) studied “Sociodemographic factors associated with incidence of dementia among senior citizens of a small town in Japan” Found that no significant difference in a 5-year average incidence rate between genders. However, the risk of developing dementia increased with age. The study population was categorized into three groups of living arrangement: those living with spouse and others, those living alone, and those living with persons other than the spouse. The incidence rate of dementia among the elderly who lived with spouse and others was significantly lower than for those among the other groups.

Bilotta et al. (2010) studied “Social vulnerability, mental health and correlates of frailty in older outpatients living alone in the community in Italy” found that Participants 'living alone' were 124 (41%). Compared to subjects 'not living alone' (n = 178), they were older, received less assistance from informal and formal caregivers, had poorer living and financial conditions, a better cognitive status and functional self-sufficiency but a worse emotional status. One-third of them (n = 41) were frail. Among frail elders (n = 116), subjects living alone also showed a higher prevalence of unexpected new diagnoses of dementia than those not living alone. Independent correlates of frailty among participants living alone were: having experienced a severe acute disease in the past year (odds ratio [OR] 303.9; 95% confidence interval [CI] 13-7091;  $p < 0.001$ ), dependence in the bathing BADL ability (OR 62.74; 95% CI 12.17-323.32;  $p < 0.001$ ), depression (OR 10.43; 95% CI 2.31-47.13;  $p = 0.002$ ) and incontinence (OR 3.98; 95% CI 1.01-15.66;  $p = 0.048$ ).

Elliott, Painter and Hudson (2009) studied investigated the relationship between living alone status and fall-related variables among community-dwelling adults who lived in a rural county in eastern North Carolina. The percentage reporting a fall was appreciably larger for those living alone (52%) than for those living with others (48%) in both genders in all age groups except for the 61-70 year old adults where the percentage was less.

Blozik et al. (2009) studied “Social network assessment in community-dwelling older persons: results from a study of three European populations” found that living alone status was more strongly associated with marginal instrumental support [OR=7.6 (95% CI 6.3, 9.1)] than with marginal emotional support [OR=4.2 (95% CI 3.4, 5.1)], and showed no statistically significant association with lack of social engagement [OR=0.9 (95% CI 0.8, 1.0)]. Risk of social isolation was more strongly related to marginal emotional support [OR=6.6 (95% CI 5.4, 8.0)] than to marginal instrumental support [OR=3.3 (95% CI 2.8, 4.0)], and was moderately related to lack of social engagement [OR=2.9 (95% CI 2.5, 3.4)]. Marginal family and friend network subscales showed consistent and unique associations with social support and social engagement

Chan, Malhotra, Malhotra and Ostbye (2011) studied “Living arrangements, social networks and depressive symptoms among older men and women in Singapore” found that women had higher depressive symptom scores than men. Living alone and living with at least 1 child (no spouse) (relative to living with spouse and children), and weak social networks outside the household were associated with higher depressive symptom scores among both men and women. Men living alone with weak social networks outside the household had higher depressive symptom scores than those with strong networks.

Foster and Neville (2010) studied “Women over the age of 85 years who live alone: a descriptive study” found that they are often perceived by both society and health professionals as frail and dependent. Three themes emerged which reflected the reality of living by themselves: "active participation", "keeping control", and "healthy living". The information gained from describing the lives of this group of women suggests that many older women are able to live full and successful independent lives in the community. This research provides nursing with a better understanding of the realities for older women who live alone. Finally, this paper will provide nurses with some ideas about how best to support this group of people as they age.

Roth, Haley, Wadley, Clay and Howard (2007) studied “Race and gender differences in perceived caregiver availability for community-dwelling middle-aged and older adults” found that variables associated with lower perceived caregiver availability from a multivariable logistic regression analysis included being female,

White, or unmarried; living alone; being older than 85; and having worse self-rated health. Spouses were the most likely caregivers for all racial and gender groups except for African American women, who identified daughters as the most likely caregivers. African American women also showed the smallest differential in perceived caregiver availability between married and unmarried (82.8% vs 75.7%), whereas White men showed the largest differential (90.9% vs 60.4%).

Udell et al. (2012) studied “Living alone and cardiovascular risk in outpatients at risk of or with atherothrombosis” found that 8594 (19%) were living alone. Living alone was associated with higher 4-year mortality and cardiovascular death; however, there was significant effect modification by age. Specifically, among younger participants, living alone compared with those living with others was associated with higher. A similar trend was observed for the risk of cardiovascular death.

## **2.6 Theories and research relating to elders and selection of questions from the questionnaire**

In this research, all related theories were reviewed in order to design/select the questions suitable and consistent with the theories and studies relating to the elderly. The theories reviewed are summarized in the table below.

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire**

<b>Theories</b>	<b>Key Concepts</b>	<b>Questions in the Questionnaire</b>
<b>1. Family relationship</b>		
<b>Family relationship</b> - Pensri Linsuvanon (2000) studied depression of the elderly living at Khwaeng Rob Muang, Khet Pathumwan, Bangkok. The results showed that	- Family relationship affects the elderly left behind or non-neglect.	- At which level of family relationship your family has now?

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

Theories	Key Concepts	Questions in the Questionnaire
<p>the monthly income, <i>family relationship</i>, social participation and health were correlated with the depression in the elderly.</p> <p>- Jirawan Prapasuchart (2002) studied behaviors of family members whose main duty was to care for dependent elderly at Nakhon Ratchasima Province. The results showed that the factors correlated with behaviors of family members whose main duty was to care for the elderly included <i>the family relationship</i>, number of family members and number of elderly in the family.</p> <p>- Vichai Saenchoom, Prudtinun Surit, Narongsak Nooson, and Thanut Kanoktes (2011) studied the factors predicting roles of family members in the care and promotion of elder health at Tambon Pawor, Mae Sod District, Tak Province. The results showed that <i>the family relationship was positively correlated with the family members' roles in the care</i></p>		

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

Theories	Key Concepts	Questions in the Questionnaire
<p><i>and promotion of elder health.</i></p> <p>- Marayad Rujivit (2004) studied the elder abuse in families at Chaiyaphoom Province. The results showed that the factors influencing the abuse to the elderly in families were the abuser's personality, abuser's behavior inducing the abuse, and <i>problems of family relationship.</i></p>		
<p><b>Family care</b></p> <p>- Thaveesak Laphukaew (2003) studied the family care to the elderly living in the municipality, Tambon Nong Hin, King Amphoe Nong Hin, Loei Province. He found that <i>the elderly received the family care in general and in each aspect at the fair level.</i> The elderly with different age, occupation, level of education, and social status received the different family care at the statistical significance.</p> <p>- Pannee Somtes (2007) studied the elder care at the family in Khon Khen. She found that <i>the elder care at the family level in</i></p>	<p>- Family care affects the elderly left behind or non-neglect.</p>	<p>- Do our family members really care for happiness and sorrow of each other? Which level of care is it?</p>

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

<b>Theories</b>	<b>Key Concepts</b>	<b>Questions in the Questionnaire</b>
<p><i>respect with physical body, psycho-sociology and economy, in general, between the family heads' practice and elders' opinions were different at the statistical significance.</i></p>		
<p><b>Family violence</b></p> <ul style="list-style-type: none"> <li>- Reiss &amp; Roth, 1993 (cited in Rapp Paglicci, Roberts and Wodarski, 2002) considered that all violent behaviors in the house were the family violence.</li> <li>- The World Health Organization (cited in Bureau of Elderly Promotion and Protectoin et al., 2012b) classified the elder abuse into 8 types:               <ol style="list-style-type: none"> <li>1) Physical abuse</li> <li>2) Psychological abuse</li> <li>3) Sexual abuse</li> <li>4) Financial and material abuse</li> <li>5) Right abuse</li> <li>6) Self-neglect</li> <li>7) Ignorance</li> <li>8) Elderly neglect</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>- The family violence against each other in the family affects the elderly left behind?</li> </ul>	<ul style="list-style-type: none"> <li>- Do our family members usually have attacks and hitting? Which level of attack or hitting your family has?</li> </ul>

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

<b>Theories</b>	<b>Key Concepts</b>	<b>Questions in the Questionnaire</b>
<p><b>Family communications</b></p> <p>- Altman &amp; McGinnies, 1960 (cited in Jutarat Ua-amnuay, 2008) stated that the group members or persons unofficially participating in any social groups were likely to perceive or judge other group members more precisely than others who were not the group members because <i>the close interpersonal relationship let those related persons</i> disclose their personal issues; so the judgments were more likely to be correct.</p>	<p>- The talks or discussions between family members affects the elderly left behind or non-neglect.</p>	<p>- Do our family members usually have talks or discussions? Which level of talks or discussions your family has?</p>
<p><b>2. Economy</b></p>		
<p><b>Family income</b></p> <p>- Lek Sombat (2006) studied the project on the current family situation in elder care. The results showed that there were some problems about the family's abilities in the elder care as listed below:</p> <p>1) Physical problems of the elderly caused by the decline of body organs. The elderly having the severe decline cause more care</p>	<p>- The family income affects the stress and elderly left behind.</p>	<p>- How about the current economic situation in your family? (income)</p>

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

Theories	Key Concepts	Questions in the Questionnaire
<p>problems.</p> <p>2) Mental problems of the elderly and caregiver.</p> <p>3) <i>Financial problems</i> to be paid for the elderly and family.</p> <p>- Prateep Aisoon and Tivakorn Kaewmanee (2011) assessed the standards of the quality of life of the elderly at Tambon Hua Dong, Amphoe Muang Pichit. The result showed that the <i>monthly income was correlated with the standards of the quality of life of the elderly.</i></p>		
<p><b>Household debt</b></p> <p>- Yukolnee Kangsositium (2004) studied and found that the elderly living in <i>indebted families were more likely to work more than</i> the elderly living in <i>out-of-debt families</i>. The elderly in families with the high living condition were more likely not to work than those in families with the low living condition.</p>	<p>- The household debt affects the stress and elderly left behind.</p>	<p>- How about the current economic situation in your family? (debt)</p>

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

Theories	Key Concepts	Questions in the Questionnaire
<b>3. Community</b>		
<p><b>Residence</b></p> <p>- According to Chai Bhodisita (2011), there were the “special households” in Thailand. These types of household could not be classified into the “main-stream households” The special households may be divided into 2 types:</p> <p>(1) Household where only elderly and children lived.</p> <p>(2) Household where only elderly lived.</p> <p>According to the processed data from the Economic and Social Survey on Households in 1986 – 2009, these special households have been increasing slowly but continuously during the past 20 years. <i>The households whose members were elders and children were usually located in rural areas rather than urban areas.</i></p>	<p>- The residence affects the elderly left behind/non-neglect?</p> <p>Because the relative system surrounding is the important variable in caring for the elderly.</p>	<p>- How about the residence of your family?</p>

**Table 2.2 Theories and key concepts about elders and questions selected to be consistent with the questionnaire (Cont.)**

Theories	Key Concepts	Questions in the Questionnaire
<p>- Wimonthip Musikkapan (2008) studied the influence of residential congestion to the labor-age population’s moving-out and to the arrangement of residential condition of old-age and young-age population. The result showed that <i>having many neighbors caused the elderly to stay with other people rather than their children</i>, and the children stayed with other people rather than the elderly.</p>		
<p><b>Number of intimate neighbors</b></p> <p>- Kuttika Thanakwang (2008) found that the <i>peer network put influence on health promotion behavior and happy ageing</i> while the network and family support put influence on the elders’ happiness. <i>The peer network put both direct and indirect influence on offering supports to the elderly.</i></p>	<p>- The social support and intimate neighbors affect the elders’ feeling about neglect/non-neglect? Because the relative system surrounding is the important variable in caring for the elderly.</p>	<p>- How many families may your family ask for help comfortably?</p>

## **CHAPTER III**

### **METHODOLOGY**

This study was the quantitative research conducted to study the family factors and their influence toward the elderly left behind in Thailand. The research relied on the secondary data from the Project of Well-being Situation among Thai families in 2011 undertaken by Thai Family Studies Association in collaboration with certain academics of the National Institute for Child and Family Development, Mahidol University. The research methodology was described below.

#### **3.1 Data sources and sample group**

The research relied on the secondary data from the Project of Well-being Situation among Thai families in 2011. This project on happiness situation of Thai families aimed at examining the happiness of Thai families by enquiring the samples who were the representatives of families around Thailand. The research tool was the questionnaire, used to survey the happiness of Thai families, improved in 2011 and distributed to 4,000 samples. The data from the samples was processed and summarized to be the report, which was further compared with the data in 2009, 2010 and 2011. The surveyed areas and sample families were selected by the multi-stage random sampling. The sample families in Thailand were divided into 5 groups subject to geographic zones: 600 families for Bangkok and vicinity; 750 families for the central region; 800 families for the northern region from the sampling in 3 provinces; 1,350 families in the northeastern region from the sampling in 4 provinces; and 500 families in the southern region from the sampling in 2 provinces in the total of 4,000 families. In each province, the sample families were selected by sampling for the interviews. The interview mainly focused on certain family members who were the informants: sons or daughters or grandchildren who were studying in school or

educational institute, older than 13 years, or wives of family heads or family heads. The sample group of this research included at least elder of each family at age of 60 years and up. The samples of this research totaled 1,565 persons.

### 3.2 Variables of the research

In studying the family factors and their influence toward the elderly left behind in Thailand, the variables were as follows:

**3.2.1 Independent variable** is the family factors, which are divided into 3 aspects:

1) **Family relationship**, e.g. level of family relationship, level of family care, level of family violence, and level of family communications.

2) **Economy**, e.g. family income and household debt

3) **Community**, e.g. family residence and number of intimate neighbors

The independents used in the research as listed above could be divided by the indicators and scoring criteria as follows:

**Table 3.1 Indicators and scoring criteria of dependent variables**

Indicators	Measurement Level of Variables	Scoring Criteria
<b>Independent Variables</b>		
<b>Family Factors</b>		
<b>1. Family relationship</b> 1.1 Level of family relationship <b>Question:</b> In your opinion, which level of family relationship does your family have now?	Ordinal Scale	1 = Not good 2 = Fair 3 = Quite good 4 = Best

**Table 3.1 Indicators and scoring criteria of dependent variables (Cont.)**

<b>Indicators</b>	<b>Measurement Level of Variables</b>	<b>Scoring Criteria</b>
1.2 Level of family care <b>Question:</b> Which level of family care your family has now?	Ordinal Scale	1 = Least real 2 = Slightly real 3 = Moderately real 4 = So real 5 = Most real
1.3 Level of family violence <b>Question:</b> Which level of family harming and hitting to other members your family has now?	Ordinal Scale	1 = Least real 2 = Slightly real 3 = Moderately real 4 = So real 5 = Most real
1.4 Level of family communications <b>Question:</b> Which level your family has talks and discussion now?	Ordinal Scale	1 = Least real 2 = Slightly real 3 = Moderately real 4 = So real 5 = Most real
<b>2. Economy</b>		
2.1 Family income <b>Question:</b> Which is the economic situation of your family now? - Income	Nominal Scale	1 = Adequate income for the family 2 = Inadequate income for the family
2.2 Household debt <b>Question:</b> Which is the economic situation of your family now?	Nominal Scale	1 = Out-of-debt 2 = Some debts 3 = Many debts

**Table 3.1 Indicators and scoring criteria of dependent variables (Cont.)**

<b>Indicators</b>	<b>Measurement Level of Variables</b>	<b>Scoring Criteria</b>
<b>3. Community</b>		
3.1 Family residence <b>Question:</b> In which zone your family lives now?	Nominal Scale	1 = Urban 2 = Rural
3.2 Number of intimate neighbors <b>Question:</b> How many families in your community or village where you lived and you had certain intimate neighbors (not relatives or village head) to which your family members might ask for advice or assistance comfortably?	Ratio Scale	0 = None 1 = 1 family 2 = 2 families 3 = 3 families 4 = 4 families

**3.2.2 Dependent variables**

The dependent variable of this research was the elderly left behind. The indicator and scoring criteria of this variable were as follows:

**Table 3.2 Indicators and scoring criteria of independent variables**

<b>Indicators</b>	<b>Measurement of Variables</b>	<b>Scoring Criteria</b>
<b>Dependent Variable</b>		
Elderly left behind <b>Question:</b> The elderly in our family usually stay alone at home.	Interval Scale	1 = Least real (0 day) 2 = Slightly real (1-2 days/week) 3= Moderately real (3-4 days/week) 4 = So real (5-6 days/week) 5 = Most real (7 days/week)

### **3.3 Data analysis**

In this research, the family factors and their influence toward the elderly left behind in Thailand were studied by the cross-sectional analysis. The data was analyzed and processed by the Statistical Package for Social Sciences. The statistic used in the data analysis was the descriptive statistic, which included the frequency, percentage, mean, Standard Deviation, Cross Tabulations Table, and Spearman-rank correlation coefficient.

## **CHAPTER IV**

### **RESULTS**

This research was conducted in 2011 to examine the family factors and their influence toward the elderly left behind in Thailand. The research relied on the secondary data from the Project of Well-being Situation among Thai families in 2011 undertaken by Thai Family Studies Association in collaboration with certain academics of the National Institute for Child and Family Development, Mahidol University. The sample group involved 1,565 elderly form 1,565 families. The results were presented in details and tables below.

#### **4.1 Information about research factors**

##### **Part 1: Demographic characteristics**

From the analysis of demographic characteristics of 1,565 questionnaire respondents from the Project of Well-being Situation among Thai families, most respondents were females (948 persons, representing 60.6%, and 948 males, representing 39.4%). In respect with age, most respondents were at age of 13-17 years (74.1%) and 18-22 years (11.8%).

In respect with residence, almost a half of respondents lived at the northeastern region (37.0%), followed by the central region, northern region, Bangkok and vicinity, and southern region at 20.8%, 19.3%, 13.7%, and 9.2% respectively as illustrated in Table 4.1.

**Table 4.1 Number and percentage of general demographic characteristics**

<b>Demographic Characteristics</b>	<b>Number (n = 1,565)</b>	<b>Percentage</b>
<b>1. Gender</b>		
- Male	617	39.4
- Female	948	60.6
<b>2. Age</b>		
- 13 - 17 years	1159	74.1
- 18 - 22 years	185	11.8
- 23 – 30 years	48	3.1
- 31 – 40 years	80	5.1
- 41 – 50 years	48	3.1
- 51 – 60 years	25	1.6
- 61 years up	20	1.3
<b>3. Present residence</b>		
- Bangkok and vicinity	215	13.7
- Northern region	302	19.3
- Northeastern region	579	37.0
- Central region	325	20.8
- Southern region	144	9.2

### **Part 2: Family factors**

Regarding the level of family relationship under the question that “Which level of family relationship your family has now?” The results showed that the questionnaire respondents had the level of family relationship at 2.92 on average or at the good level. When considering each aspect, almost a half of respondents had the level of family relationship at the quite good level (37.8%), followed by the fair level, best level and bad level at 29.6%, 28.9%, and 3.6% respectively.

Regarding the level of family care under the question that “Which level of family care your family has now?” The results showed that the questionnaire respondents had the level of family care at 4.21 on average or at the so real level. When considering each aspect, almost a half of respondents had the level of family

care at the most real level (42.9%), followed by the most real level, moderately real level, slightly real, and least real level at 38.2%, 16.6%, 1.5% and 0.8% respectively.

Regarding the level of family violence under the question that “Which level of family harming and hitting to other members your family has now?” The results showed that the questionnaire respondents had the level of family violence at 1.43 on average or at the lowest level. When considering each aspect, over a half of respondents had the level of family violence at the least real level (76.2%), followed by the slightly real level, moderately real level and most real level at 12.2%, 6.1%, 3.2% and 2.3% respectively.

Regarding the level of family communications under the question that “Which level your family has talks and discussion now?” The results showed that the questionnaire respondents had the level of family violence at 4.02 on average or at the high level. When considering each aspect, almost a half of respondents had the level of family communications at the so real level (38.9%), followed by the most real level, moderately real level, slightly real and least real level at 35.0%, 20.4%, 4.3% and 1.3% respectively.

Regarding the family income, over a half of respondents earned the adequate income for the family (91.2%) while only 8.8% had inadequate income for the family. Regarding the household debt, over a half of respondents had some debts (63.5%) while another 29.6% and 6.8% of them had no debt and had many debts respectively. Regarding the residence, over a half of the respondents lived in urban areas (55.7%) while another 44.3% lived in rural areas.

Regarding the number of intimate neighbors, only 31.1% of respondents had 4 families as neighbors. More interestingly, 28.4% of respondents had no intimate neighbors as detailed in Table 4.2.

**Table 4.2 Number and percentage of the family factors of elders**

Family Factors	Number (n = 1,565)	Percentage
<b>1. Family relationship</b>		
1.1 Level of family relationship		
(Which level of family relationship your family has now?)		
	57	3.6
- Not so good	464	29.6
- Fair	591	37.8
- Quite good	453	28.9
- Best		
The level of family relationship: 2.92 (SD = 0.852)		
1.2 Level of family care		
(Do your family members care for happiness and sorrow of each other?)		
	12	0.8
- Least real	24	1.5
- Slightly real	260	16.6
- Moderately real	598	38.2
- So real	671	42.9
- Most real		
The level of family care: 4.21 (SD = 0.826)		
1.3 Level of family violence		
(Our family members usually harm and attack each other)		
	1192	76.2
- Least real	191	12.2
- Slightly real	96	6.1
- Moderately real	50	3.2
- So real	36	2.3
- Most real		
Level of family violence: 1.43 (SD = 0.915)		

**Table 4.2 Number and percentage of the family factors of elders (Cont.)**

Family Factors	Number (n = 1,565)	Percentage
1.4 Level of family communications		
(Our family members always have talks and discussions)		
- Least real	21	1.3
- Slightly real	68	4.3
- Moderately real	319	20.4
- So real	609	38.9
- Most real	548	35.0
Level of family violence: 4.02 (SD = 0..921)		
<b>2. Economy</b>		
2.1 Family income		
- Adequate income	1427	91.2
- Inadequate income	138	8.8
2.2 Household debts		
- Out-of-debt	464	29.6
- Some debts	994	63.5
- Many debts	107	6.8
<b>3. Community</b>		
3.1 Family residence		
- Urban	872	55.7
- Rural	693	44.3
3.2 Number of intimate neighbors		
- None	445	28.4
- 1 family	159	10.2
- 2 families	245	15.7
- 3 families	230	14.7
- 4 families	486	31.1
Number of intimate neighbors: 2.10 (SD = 1.619)		

### Part 3: Elderly left behind

The results showed that, for the days that the elderly were being left behind to stay alone, 28.3% of the elderly staying alone for 0 day/week, followed by 1-2 days/week, 3-4 days/week and 5-6 days/week (23.0%, 22.6% and 16.1% respectively). It was obvious that there were 10% of the elderly being left behind at home for 7 days/week as illustrated in Table 4.3.

**Table 4.3 Number and percentage of elderly left behind**

Attributes	Number (n = 1,565)	Percentage
<b>Number of days being left behind at home</b>		
- 0 day	443	28.3
- 1-2 days/week	360	23.0
- 3-4 days/week	353	22.6
- 5-6 days/week	252	16.1
- 7 days/week	157	10.0
Level of elderly left behind: 2.57 (SD = 1.318)		

### Part 4: Classification of elderly left behind and family factors

This part was the classification of elderly left behind, and the analysis of family factors, which involved the family relationship, economy and community. The descriptive statistic from Cross Tabulations Table was used for the analysis of each factor.

In the classification of elderly left behind, the factors regarding the family relationship consisted of the level of family relationship, level of family care, level of family violence, and level of family communications.

When considering the elderly left behind as classified by the level of **family relationship**, the questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week obviously had the good level of family relationship or it was at the best level (35.4%). Most elderly being left behind to stay alone at home for 1-2 days per week had the quite good level of family relationship (41.7%). Most elderly being left behind to stay alone at home for 3-4 days

per week had the quite good level of family relationship (35.4%). Most elderly being left behind to stay alone at home for 5-6 days per week had the quite good level of family relationship (41.7%). Most elderly being left behind to stay alone at home for 7 days per week had the quite good level of family relationship (36.3%).

Based on the data analysis on the length of elderly left behind, the elderly being left behind to stay alone at home for 0 day per week obviously had the good level of family relationship if compared with the elderly being left behind to stay alone at home for 7 days per week. However, the elderly being left behind to stay alone at home for 1-2 days per week, 3-4 days per week and 5-6 days per week had no different level of family relationship as illustrated in Table 4.4.

**Table 4.4 Number and percentage classified by elderly left behind and level of family relationship**

Elderly left behind	Level of Family Relationship				Total	Number (family)
	Not good	Fair	Quite good	Best		
0 day	2.3	27.5	34.8	35.4	100.0	443
1-2 days per week	2.8	30.0	41.7	25.6	100.0	360
3-4 days per week	4.5	31.7	35.4	28.3	100.0	353
5-6 days per week	4.0	29.8	41.7	24.6	100.0	252
7 days per week	7.0	29.9	36.3	26.8	100.0	157

When considering the elderly left behind as classified by the level of **family care**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week obviously had the level of family care at the most real level (46.7%). Most elderly being left behind to stay alone at home for 1-2 days per week had the level of family care at the most real level (41.7%). Most elderly being left behind to stay alone at home for 3-4 days per week had the level of family care at the so real level (39.4%). Most elderly being left behind to stay alone at home for 5-6 days per week had the level of family care at the so real level (46.0%). Most elderly being left behind to stay alone at home for 7 days per week had the level of family care at the most real level (54.8%).

Based on the data analysis on the length of elderly left behind, the level of family care for the elderly was mostly at the most real level. More interestingly, 54.8% of elderly being left behind to stay alone at home for 7 days per week had the level of family care at the most real level. This means that despite the good family care, the elderly were being left behind to stay alone at home for 7 days per week. The details were illustrated in Table 4.5.

**Table 4.5 Number and percentage classified by elderly left behind and level of family care**

Elderly left behind	Level of Family Care					Total	Number (family)
	Least real	Slightly real	Moderately real	So real	Most real		
0 day	0.7	1.6	16.5	34.5	46.7	100.0	443
1-2 days per week	0.3	1.9	13.9	42.2	41.7	100.0	360
3-4 days per week	0.6	2.0	19.3	39.4	38.8	100.0	353
5-6 days per week	0.8	0.4	16.7	46.0	36.1	100.0	252
7 days per week	2.5	1.3	17.2	24.2	54.8	100.0	157

When considering the elderly left behind as classified by the level of **family violence**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week had the level of family violence at the least real level (88.7%). Most elderly being left behind to stay alone at home for 1-2 days per week had the level of family violence at the least real level (76.1%). Most elderly being left behind to stay alone at home for 3-4 days per week had the level of family violence at the least real level (70.3%). Most elderly being left behind to stay alone at home for 5-6 days per week had the level of family violence at the least real level (66.7%). Most elderly being left behind to stay alone at home for 7 days per week had the level of family violence at the least real level (69.4%).

Based on data analysis, the family violence was correlated with the elderly left behind. That is, in the families with little violence, it was less likely that the elderly were being left behind to stay alone at home. In contrast, in the families with much violence, it was more likely that the elderly were being left behind to stay alone at home. Obviously, 8.9% of the elderly being left behind to stay alone at home for 7 days per week had the level of family violence at the least real level. This means that despite the low level of family violence, the elderly left behind still existed as illustrated in Table 4.6.

**Table 4.6 Number and percentage classified by elderly left behind and level of family violence**

Elderly left behind	Level of Family Violence					Total	Number (family)
	Least real	Slightly real	Moderately real	So real	Most real		
0 day	88.7	7.0	2.9	0.2	1.1	100.00	443
1-2 days per week	76.1	16.7	4.2	1.4	1.7	100.0	360
3-4 days per week	70.3	14.7	9.1	4.5	1.4	100.0	353
5-6 days per week	66.7	11.9	9.5	9.5	2.4	100.0	252
7 days per week	69.4	11.5	7.6	2.5	8.9	100.0	157

When considering the elderly left behind as classified by the level of **family communications**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week had the level of family communications at the most real level (41.3%). Most elderly being left behind to stay alone at home for 1-2 days per week had the level of family communications at the so real level (43.1%). Most elderly being left behind to stay alone at home for 3-4 days per week had the level of family communications at the so real level (40.2%). Most elderly being left behind to stay alone at home for 5-6 days per week had the level of family communications at the so real level (40.1%). Most elderly being left behind to

stay alone at home for 7 days per week had the level of family communications at the most real level (40.1%).

Based on data analysis on the length of elderly left behind, the level of family communications for the elderly was mostly at the so real level. More interestingly, the elderly being left behind to stay alone at home for 7 days per week had the level of family communications at the most real level as illustrated in Table 4.7.

**Table 4.7 Number and percentage classified by elderly left behind and level of family communications**

Elderly left behind	Level of Family Communications					Total	Number (family)
	Least real	Slightly real	Moderately real	So real	Most real		
0 day	0.7	3.4	20.8	33.9	41.3	100.0	443
1-2 days per week	0.6	5.3	18.1	43.1	33.1	100.0	360
3-4 days per week	2.8	4.8	21.0	40.2	31.2	100.0	353
5-6 days per week	0.8	4.4	25.8	40.1	29.0	100.0	252
7 days per week	2.5	3.8	14.6	38.9	40.1	100.0	157

This part presented the elderly left behind and the factor relating to economy, which consisted of the family income and household debts.

When considering the elderly left behind as classified by the **family income**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week had the adequate income for the family (92.3%). Most elderly being left behind to stay alone at home for 1-2 days per week had the adequate income for the family (91.1%). Most elderly being left behind to stay alone at home for 3-4 days per week had the adequate income for the family (92.4%). Most elderly being left behind to stay alone at home for 5-6 days per week had the

adequate income for the family (88.5%). Most elderly being left behind to stay alone at home for 7 days per week had the adequate income for the family (89.8%).

Based on data analysis on the length of elderly left behind, almost all elderly were in the families with adequate income for the family. More interestingly, 10% of the elderly being left behind to stay alone at home for 5-6 days and 7 days per week were in the families with inadequate income. This means that about 10% of Thai families had no adequate income for the families; thus, they had to leave the elderly at home to work out, or they tended to leave the elderly behind forever because they did not have the adequate income to care for them. However, in the families with adequate income for the families, 90% of them also being left behind the elderly to stay alone at home for 5-6 days and 7 days per week. It is possible that such adequate income came from working outside every day, and it is necessary to leave the elderly alone at home as illustrated in Table 4.8.

**Table 4.8 Number and percentage classified by elderly left behind and family income**

Elderly left behind	Income			Number (family)
	Adequate income	Inadequate income	Total	
0 day	92.3	7.7	100.0	443
1-2 days per week	91.1	8.9	100.0	360
3-4 days per week	92.4	7.6	100.0	353
5-6 days per week	88.5	11.5	100.0	252
7 days per week	89.8	10.2	100.0	157

When considering the elderly left behind as classified by **household debts**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week had some debts (62.5%). Most elderly being left behind to stay alone at home for 1-2 days per week had some debts (61.1%). Most elderly being left behind to stay alone at home for 3-4 days per week had some debts (65.2%). Most elderly being left behind to stay alone at home for 5-6 days per week had some debts (65.1%). Most elderly being left behind to stay alone at home for 7 days per week had some debts (54.1%).

Based on data analysis on the length of elderly left behind, it is interestingly that despite the out-of-debt families, 36.3% of the elderly were being left behind to stay alone at home. This statistic was quite high, which presented that the elderly left behind could be found in the out-of-debt families. For the indebted families, 65% of the elderly left behind for 5-6 days and 7 days per week as illustrated in Table 4.9.

**Table 4.9 Number and percentage classified by elderly left behind and household debt**

Elderly left behind	Income			Total	Number (family)
	Out-of-debt	Some debts	Many debts		
0 day	29.6	62.5	7.9	100.0	443
1-2 days per week	28.3	66.1	5.6	100.0	360
3-4 days per week	28.3	65.2	6.5	100.0	353
5-6 days per week	29.4	65.1	5.6	100.0	252
7 days per week	36.3	54.1	9.6	100.0	157

This part presented the elderly left behind and factors relating to the community, which consisted of the family residence and number of intimate neighbors.

When considering the elderly left behind as classified by the **family residence**, most questionnaire respondents in the families leaving the elderly behind to stay alone at home for 0 day per week lived in the urban areas (55.8%). Most elderly being left behind to stay alone at home for 1-2 days per week lived in the urban areas (51.9%). Most elderly being left behind to stay alone at home for 3-4 days per week lived in the urban areas (55.2%). Most elderly being left behind to stay alone at home for 5-6 days per week lived in the urban areas (59.1%). Most elderly being left behind to stay alone at home for 7 days per week lived in the urban areas (59.9%).

Based on data analysis on the length of elderly left behind in the families leaving the elderly behind to stay alone at home either in urban or rural areas, particularly in urban areas where most elderly were being left behind to stay alone at

home for 7 days per week. According to the data in the following table, there were 157 families leaving the elderly behind to stay alone at home for 7 days per week and 60% of them were in urban areas as illustrated in Table 4.10.

**Table 4.10 Number and percentage classified by elderly left behind and family residence**

Elderly left behind	Family Residence			Number (family)
	Urban	Rural	Total	
0 day	55.8	44.2	100.0	443
1-2 days per week	51.9	48.1	100.0	360
3-4 days per week	55.2	44.8	100.0	353
5-6 days per week	59.1	40.9	100.0	252
7 days per week	59.9	40.1	100.0	157

When considering the elderly left behind as classified by the **number of intimate neighbors**, most families leaving the elderly behind to stay alone at home for 0 day per week had intimate neighbors for 4 families (32.7%). Most elderly being left behind to stay alone at home for 1-2 days per week had intimate neighbors for 4 families (33.1%). Most elderly being left behind to stay alone at home for 3-4 days per week had no intimate neighbors (33.7%). Most elderly being left behind to stay alone at home for 5-6 days per week had intimate neighbors for 4 families (31.7%). Most elderly being left behind to stay alone at home for 7 days per week had no intimate neighbors (29.9%).

Based on data analysis on the length of elderly left behind in the families leaving the elderly behind to stay alone at home, most families had the intimate neighbors for 4 families. In addition, the elderly being left behind to stay alone at home for 3-4 days per week and 7 days per week had no intimate neighbors as illustrated in Table 4.11

**Table 4.11 Number and percentage classified by elderly left behind and number of intimate neighbors**

Elderly left behind	Number of Intimate Neighbors					Total	Number (family)
	None	1 family	2 families	3 families	4 families		
0 day	24.2	10.4	16.7	16.0	32.7	100.0	443
1-2 days per week	26.1	10.0	17.2	13.6	33.1	100.0	360
3-4 days per week	33.7	10.8	14.2	13.3	28.0	100.0	353
5-6 days per week	31.0	9.1	15.1	13.1	31.7	100.0	252
7 days per week	29.9	10.2	13.4	19.1	27.4	100.0	157

#### 4.2 Correlation between elderly left behind and family factors

The correlation between elderly left behind and factors relating to the family was analyzed by Spearman Rank Correlation Coefficient in order to study the correlation of more than 2 interesting variables. The Spearman Rank Correlation Coefficient could present the values in respect with both level and direction of correlation of such variables with values between -1 to +1.

According to the initial setting in the analysis of Spearman Rank Correlation Coefficient, both sets of variables, either independent or dependent, must be in the ordinal scale or interval scale or ratio scale. Therefore, the variables in respect with the level of family relationship, level of family care, level of family violence, level of family communications and number of intimate neighbors were sorted before computing their correlation with the elderly left behind variable. There were 5 models of studying such correlation as follows:

1) Examination of correlation between elderly left behind and the level of family relationship under the following hypothesis:

$H_0$ : The elderly left behind was not correlated with the level of family relationship.

$H_1$ : The elderly left behind was correlated with the level of family relationship.

The result showed that the statistical significance (2-tailed) from the prediction equation = 0.003. This meant that  $H_0$  was rejected, that is, the elderly left behind was correlated with the level of family relationship at the statistical significance of 0.01 and  $r = -0.076$ . The low correlation and negative value of  $r$  meant that the higher level of family relationship was, the lesser the elderly left behind would be with the low level of correlation.

2) Examination of correlation between elderly left behind and the level of family care under the following hypothesis:

$H_0$ : The elderly left behind was not correlated with the level of family care.

$H_1$ : The elderly left behind was correlated with the level of family care.

The result showed that the  $r$  value was  $-0.024$  and the statistical significance (2-tailed) from the prediction equation = 0.353. This meant that  $H_0$  was accepted, that is, the elderly left behind was not correlated with the level of family care at the statistical significance of 0.05.

3) Examination of correlation between elderly left behind and the level of family violence under the following hypothesis:

$H_0$ : The elderly left behind was not correlated with the level of family violence.

$H_1$ : The elderly left behind was correlated with the level of family violence.

The result showed that the statistical significance (2-tailed) from the prediction equation = 0.000. This meant that  $H_0$  was rejected, that is, the elderly left behind was correlated with the level of family violence at the statistical significance of 0.01 and  $r = 2.000$ . The low correlation and positive value of  $r$  meant that the higher level of family violence was, the more the elderly left behind would be with the low level of correlation.

4) Examination of correlation between elderly left behind and the level of family communications under the following hypothesis:

$H_0$ : The elderly left behind was not correlated with the level of family communications.

$H_1$ : The elderly left behind was correlated with the level of family communications.

The result showed that the statistical significance (2-tailed) from the prediction equation = 0.038. This meant that  $H_0$  was rejected, that is, the elderly left behind was correlated with the level of family communications at the statistical significance of 0.05 and  $r = -0.052$ . The low correlation and negative value of  $r$  meant that the higher level of family communications was, the lesser the elderly left behind would be with the low level of correlation.

5) Examination of correlation between elderly left behind and the number of intimate neighbors under the following hypothesis:

$H_0$ : The elderly left behind was not correlated with the number of intimate neighbors.

$H_1$ : The elderly left behind was correlated with the number of intimate neighbors.

The result showed that the statistical significance (2-tailed) from the prediction equation = 0.030. This meant that  $H_0$  was rejected, that is, the elderly left behind was correlated with the number of intimate neighbors at the statistical significance of 0.05 and  $r = -0.055$ . The low correlation and negative value of  $r$  meant that the higher number of intimate neighbors was, the lesser the elderly left behind would be as illustrated in Table 4.12.

**Table 4.12 Analysis of correlation between variables relating to the level of family relationship, level of family care, level of family violence, level of family communications and number of intimate neighbors, and the variable relating to the elderly left behind based on Spearman Rank Correlation Coefficient**

Variables		Elderly left behind
Level of family relationship (Independent Variable 1)	Correlation	-0.076**
	Sig.	0.003
Level of family care (Independent Variable 2)	Correlation	-0.024
	Sig.	0.353
Level of family violence (Independent Variable 3)	Correlation	0.200**
	Sig.	0.000
Level of family communications (Independent Variable 4)	Correlation	-0.052*
	Sig.	0.038
Number of intimate neighbors (Independent Variable 5)	Correlation	-0.055*
	Sig.	0.030

\*\*Statistical significance of .01 ( $p > 0.01$ ), \* Statistical significance of .05 ( $p > 0.05$ )

## **CHAPTER V**

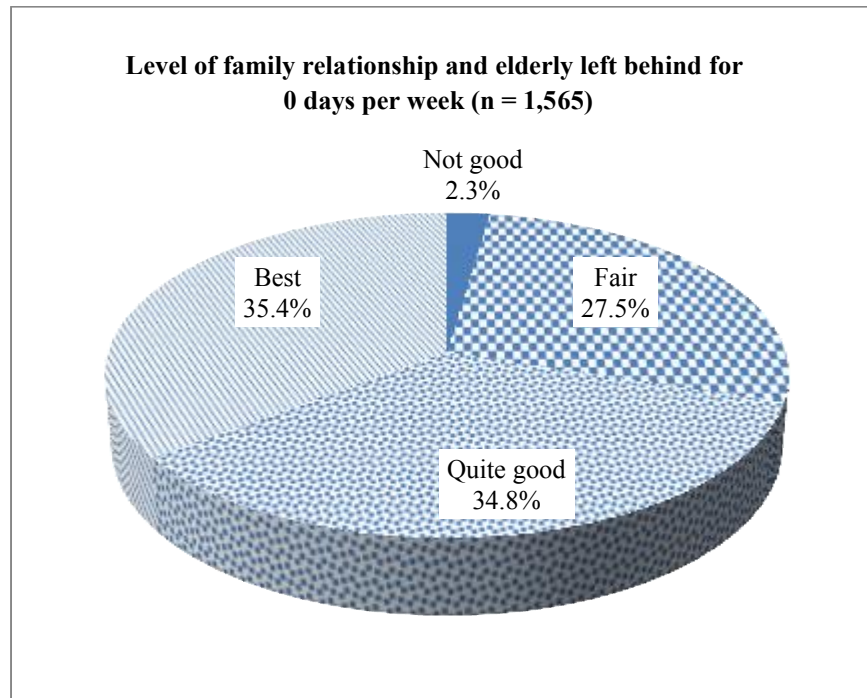
### **DISCUSSION**

The discussion on the research on family factors and their influence toward the elderly left behind in Thailand was based on the following topics:

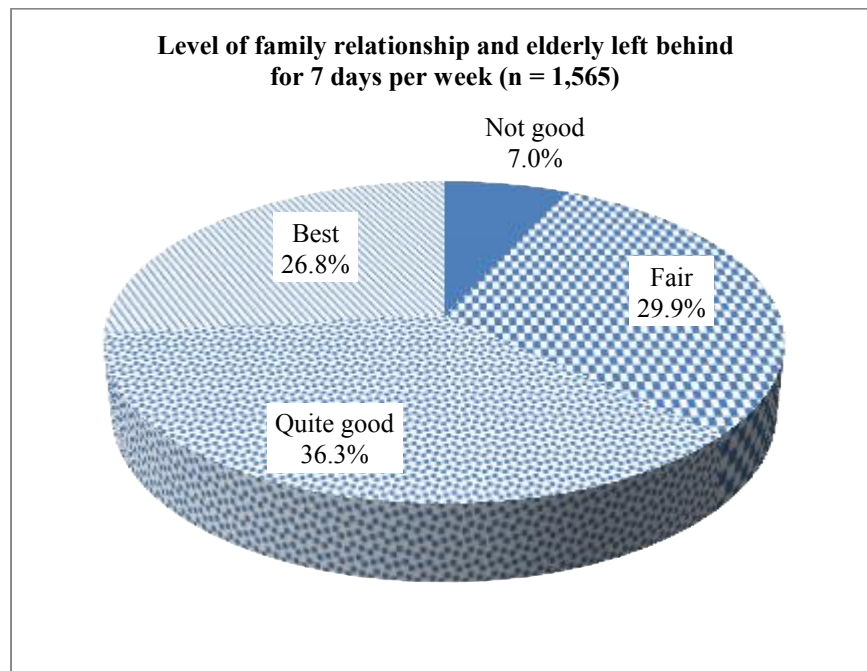
- 5.1 Level of family relationship and elderly left behind
- 5.2 Level of family care and elderly left behind
- 5.3 Level of family violence and elderly left behind
- 5.4 Level of family communications and elderly left behind
- 5.5 Family income and elderly left behind
- 5.6 Household debt and elderly left behind
- 5.7 Family residence and elderly left behind
- 5.8 Number of intimate neighbors and elderly left behind

#### **5.1 Level of family relationship and elderly left behind**

Regarding the level of family relationship and elderly left behind, the finding showed that the elderly left behind to stay alone at home for 0 day per week, obviously, had the good level of family relationship if compared with those left behind to stay alone at home for 7 days per week. However, the elderly left behind to stay alone at home for 1-2 days, 3-4 days and 5-6 days per week had no different level of family relationship. This meant that although the families and elderly are facing the rapidly changing social circumstances that affect the families inevitably, the family relationship must be retained as the family is a key mechanism for the family strength, and it is also an important condition in preventing the elder abuse as shown in Chart 5.1 and 5.2.



**Chart 5.1 Percentage of the level of family relationship and elderly left behind for 0 day a week**

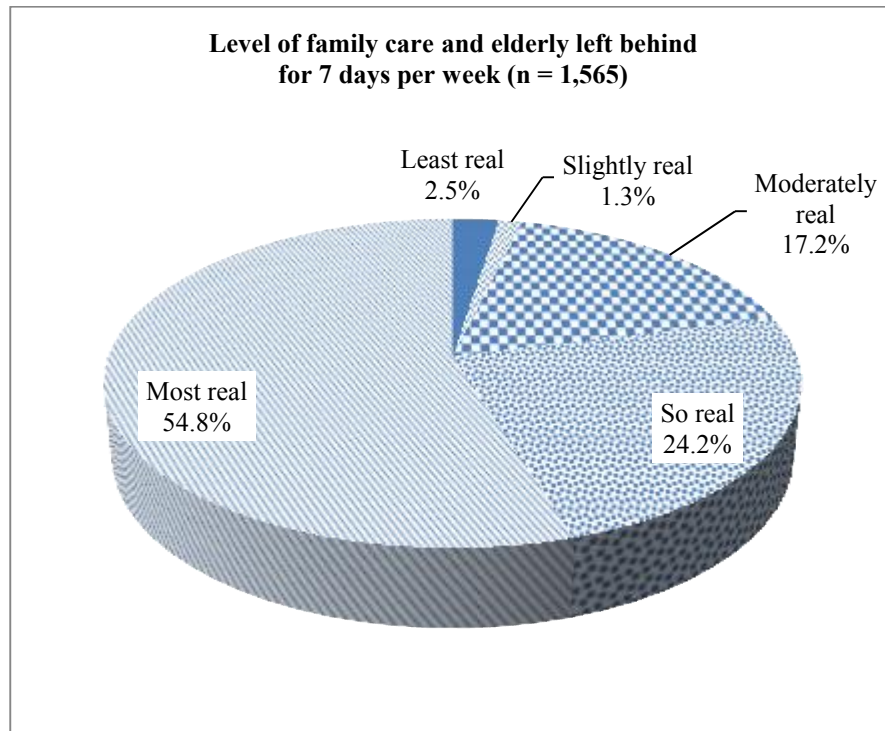


**Chart 5.2 Percentage of the level of family relationship and elderly left behind for 7 day a week**

From the analysis of family relationship and elderly left behind by Spearman Rank Correlation Coefficient, the finding showed that the elderly left behind was correlated with the level of family relationship at the statistical significance of 0.05, and the correlation was in the opposite direction. This meant that the higher level of family relationship was, the lesser the elderly left behind would be. This finding was consistent with Jirawan Prapasuchart (2002) who studied the behavior of family members with the main duty in the elder care, and found that the factors correlated with studied the behavior of family members with the main duty in the elder care was the family relationship. This meant that, when the family relationship was good, the family members with the main duty in the elder care would have the good behavior. The study of Vichai Saenchoom et al. (2011) showed that the family relationship was positively correlated with the family members' role in the care and promotion of elder health. This meant that when the family relationship was good, the elder care and promotion would be good as well. In addition, the study of Munyad Rujivit (2004) showed that the problems of family relationship was correlated with the elder abuse, that is, when the family relationship was positive, the elder abuse would be lower than the families whose family relationship was bad or negative.

## **5.2 Level of family care and elderly left behind**

Regarding the level of family care and elderly left behind, the finding showed that 54.8% of elderly left behind to stay alone at home for 7 days per week lived in the families with the level of family care at the most real level. This meant that although the families offered the good care to each other, the elderly were still left behind to stay alone at home for 7 days a week as shown in Chart 5.3.



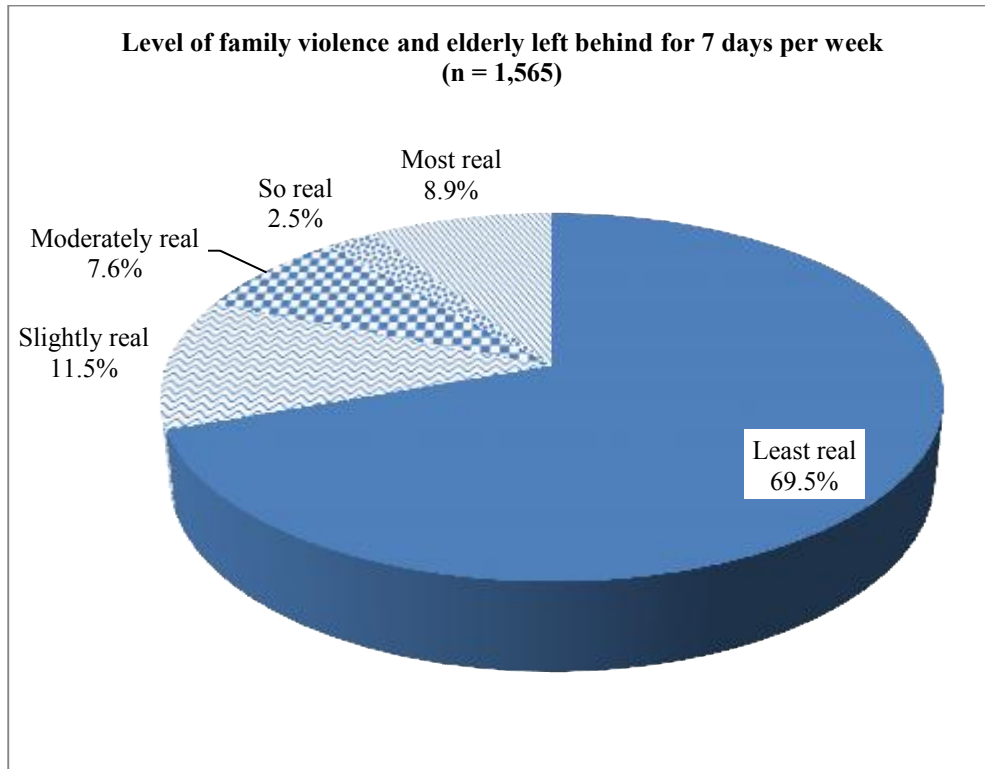
**Chart 1.3 Percentage of the level of family care and elderly left behind for 7 days a week**

From the analysis of family care and elderly left behind by Spearman Rank Correlation Coefficient, the finding showed the consistency with the data analysis by the descriptive statistics, that is, the elderly left behind was not correlated with the level of family care at the statistical significance of 0.05. This is consistent with the studies by Sarinya Kaikaew and Chamaiporn Kanchanakijksakul (2010) that the time contribution by family members did not influence the happiness of the elderly.

### **5.3 Level of family violence and elderly left behind**

Regarding the level of family violence and elderly left behind, the finding from the analysis of descriptive statistics showed that most elderly left behind to stay alone at home for 7 days per week had the level of family violence at the least real level. This meant that although the level of family violence was low, the elderly left behind still existed. Obviously, 8.9% of the elderly left behind to stay alone at home

for 7 days per week had the level of family violence at the most real level as shown in Chart 5.4.

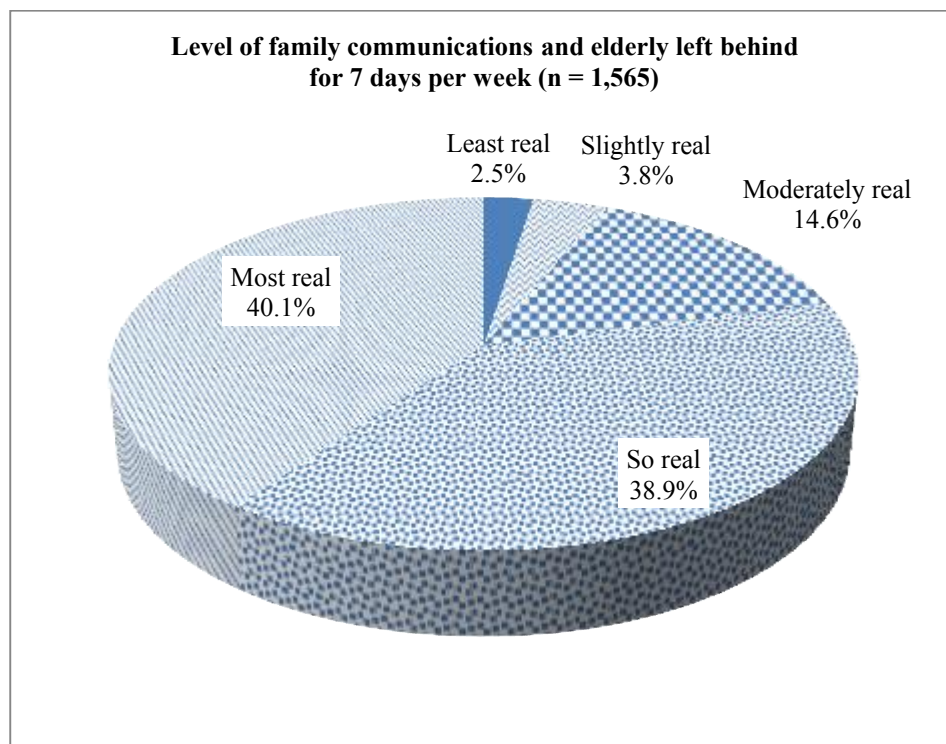


**Chart 5.4 Percentage of the level of family violence and elderly left behind for 7 days a week**

From the analysis of family violence and elderly left behind by Spearman Rank Correlation Coefficient, the finding showed that the elderly left behind was correlated with the level of family violence at the statistical significance of 0.01, and the correlation was positive. This meant that the higher level of family violence was, the higher the elderly left behind would be. This showed that the family members' violent behavior led to the elderly left behind. This finding was consistent with Munyad Rujivit (2004) who found that the factors influencing the elder abuse in the family included the personalities of the abuser, certain arousing behavior of the abuser, violence, family relationship problems, and the abuser's experience in seeing the elder abused other persons. This finding showed that various forms of family violence resulted to the elderly left behind.

#### 5.4 Level of family communications and elderly left behind

Regarding the level of family communications and elderly left behind, the finding showed that most elderly left behind to stay alone at home had the level of family communications at the so real level. Obviously, the elderly left behind to stay alone at home for 7 days per week had the level of family communications at the most real level as shown in Chart 5.5.



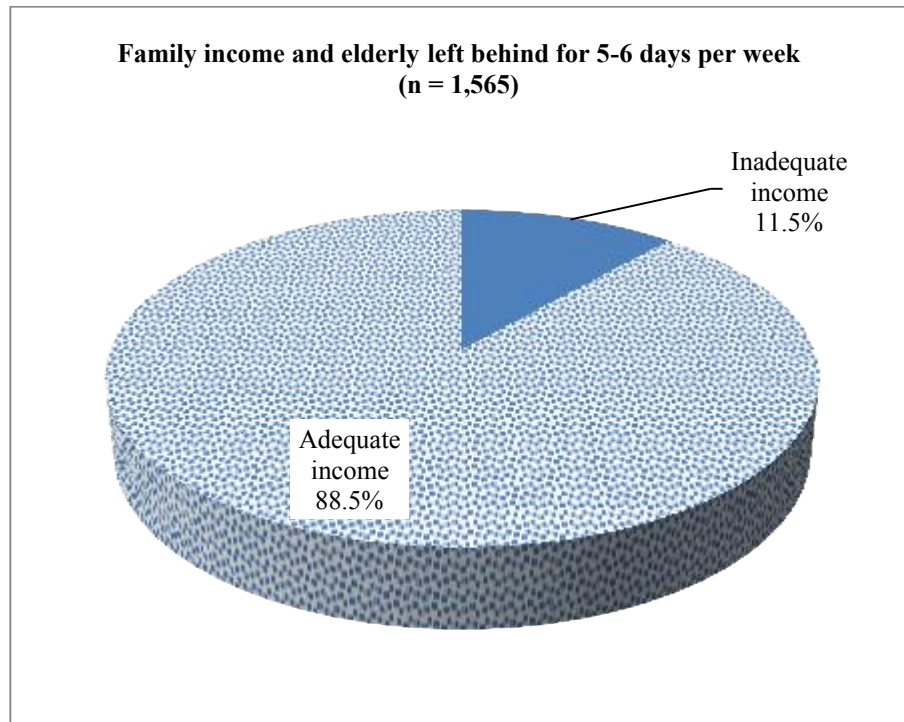
**Chart 5.5 Percentage of the level of family communications and elderly left behind for 7 days a week**

From the analysis of family communications and elderly left behind by Spearman Rank Correlation Coefficient, the finding showed that the elderly left behind was correlated with the level of family communications at the statistical significance of 0.01, and the correlation was negative. This meant that the higher level of family communications was, the lower the elderly left behind would be. This finding was consistent with Altman & McGinnies, 1960 (cited in Jutharat Ua-amnuay, 2008) that the interpersonal intimacy aroused those related persons to disclose their personal matters, which led to better decision-making and solutions for any frustration

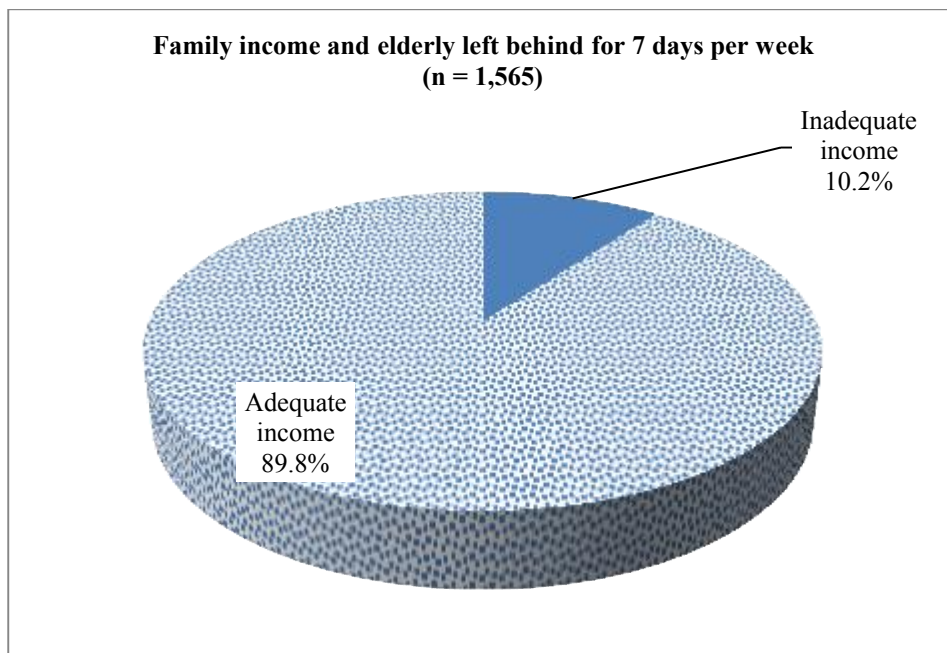
and problems finally. This meant that if the elderly can communicate their needs while the family members listen to them, the elderly left behind would be decreasing.

### **5.5 Family income and elderly left behind**

Regarding the family income and elderly left behind, the finding showed that almost all elderly left behind to stay alone at home lived in the families with adequate income. More interestingly, 10% of the elderly left behind to stay alone at home for 5-6 days and 7 days per week lived in the families with inadequate income. This meant that 10% of Thai families had the inadequate income; so they had to leave the elderly behind to work outside or it was likely that they would leave the elderly behind forever because the families had no enough income to care for the elderly. Even the families with adequate income, 90% of them left behind the elderly to stay alone at home for 5-6 days and 7 days per week. This data meant that although the Thai families had the adequate income, the elderly left behind still existed as shown in Chart 5.6 and 5.7.



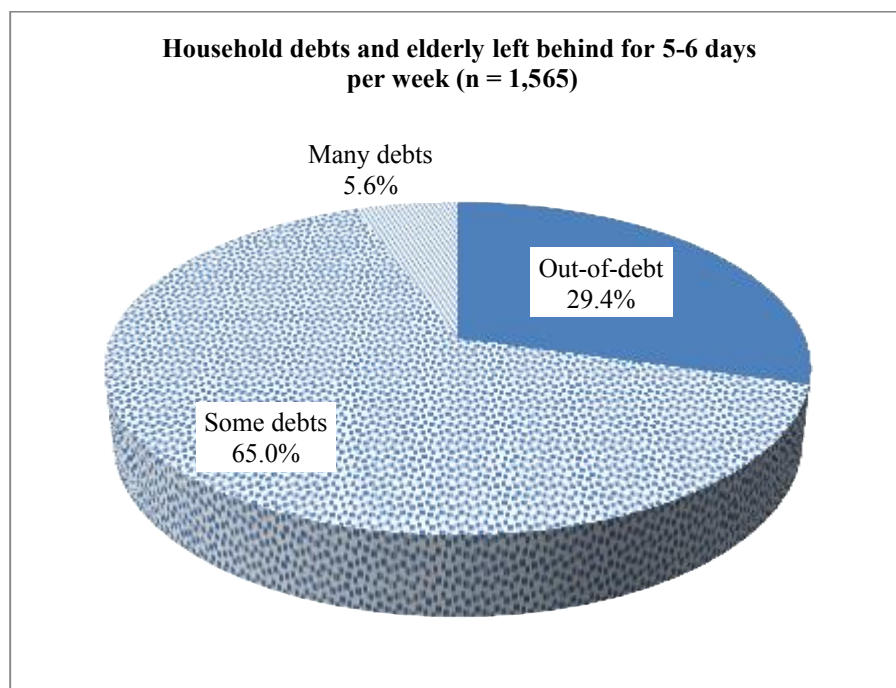
**Chart 5.6** Percentage of the family income and elderly left behind for 5-6 days a week



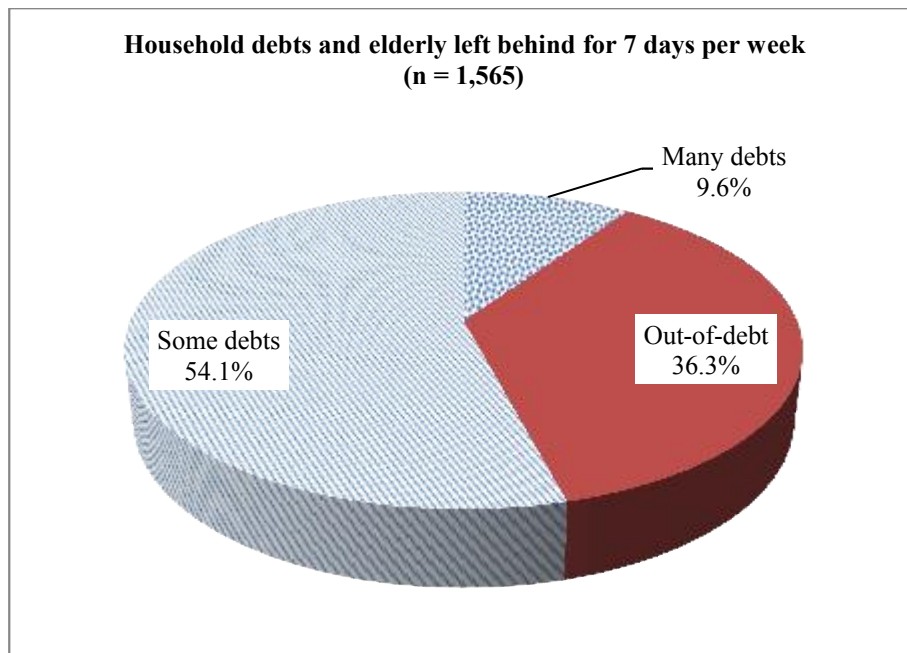
**Chart 5.7** Percentage of the family income and elderly left behind for 7 days a week

## 5.6 Household debts and elderly left behind

Regarding the household debts and elderly left behind, the finding showed that 36.3% of out-of-debt families left behind the elderly to stay alone at home for 7 days per week, which is a high rate. This meant that despite in the out-of-debt families, the elderly left behind still existed. For other indebted families, 65% of them left behind to elderly to stay alone at home for 5-6 days and 7 days per week. From surveying 20 million households around the country, over a half of them had some debts in the amount of Baht 134,900 per household on average (National Statistical Office, 2011). This meant that if the family had some debts, the family members had to spend much time to earn for living, which resulted to the elderly left behind. According to Yukolnee Kangasatium (2004), the elderly living in indebted families were more likely to work more than the elderly living in out-of-debt families. This meant that the debts drew the time of every family member to work for the family. Thus, it is possible that the elderly incapable of working may be left behind as shown in Chart 5.8 and 5.9.



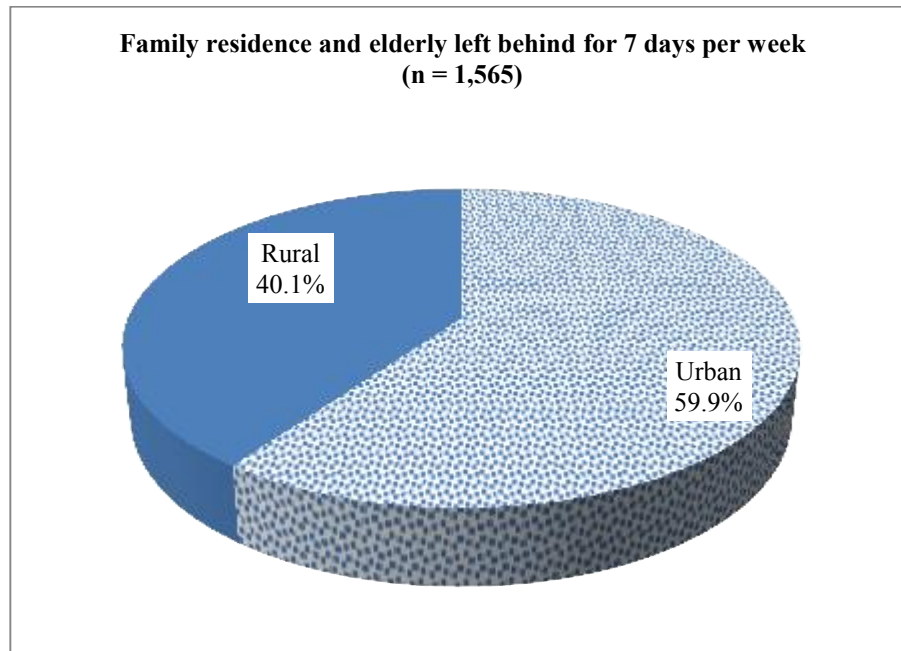
**Chart 5.8 Percentage of household debts and elderly left behind for 5-6 days a week**



**Chart 5.9 Percentage of household debts and elderly left behind for 7 days a week**

### **5.7 Family residence and elderly left behind**

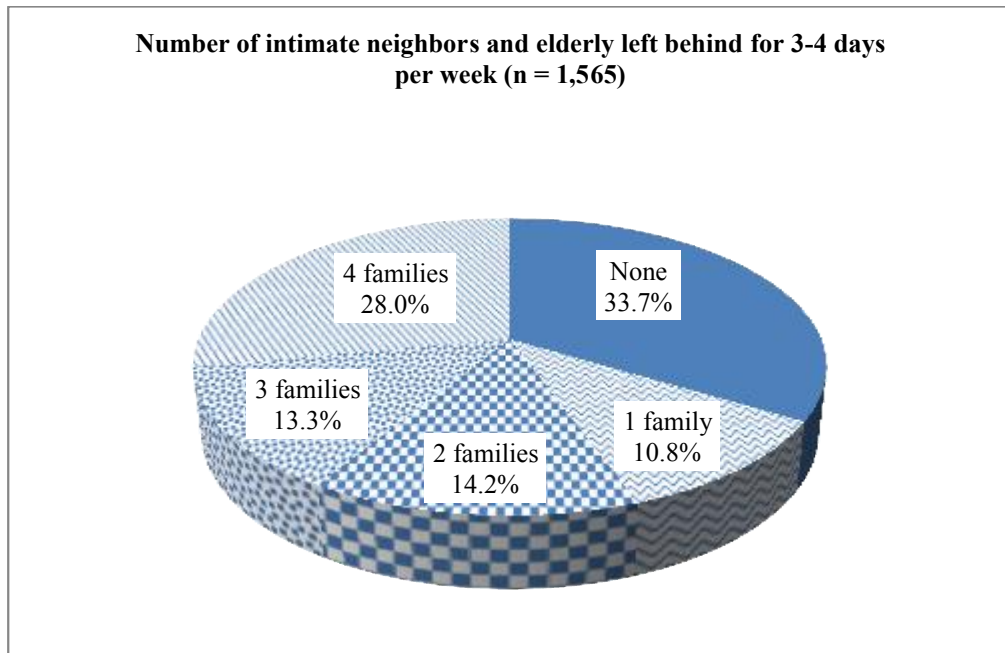
Regarding the household debts and elderly left behind, the finding showed that the families with elderly left behind existed everywhere, either in urban or rural areas, particularly in urban areas where most elderly were left behind to stay alone at home for 7 days per week. According to the data in the following table, there were 157 families leaving the elderly behind to stay alone at home for 7 days per week and 60% of them were in urban areas. This meant that more families in urban areas left behind the elderly to stay alone at home. This finding was not consistent with the study conducted by Chai Bhodisita (2011), there were the “special households” in Thailand. They were the households where only elderly and children lived, or the households where only elderly lived. These types of household have been increasing gradually during the past 20 years. Most households where only elderly and children lived together were in the rural areas as shown in Chart 5.10.



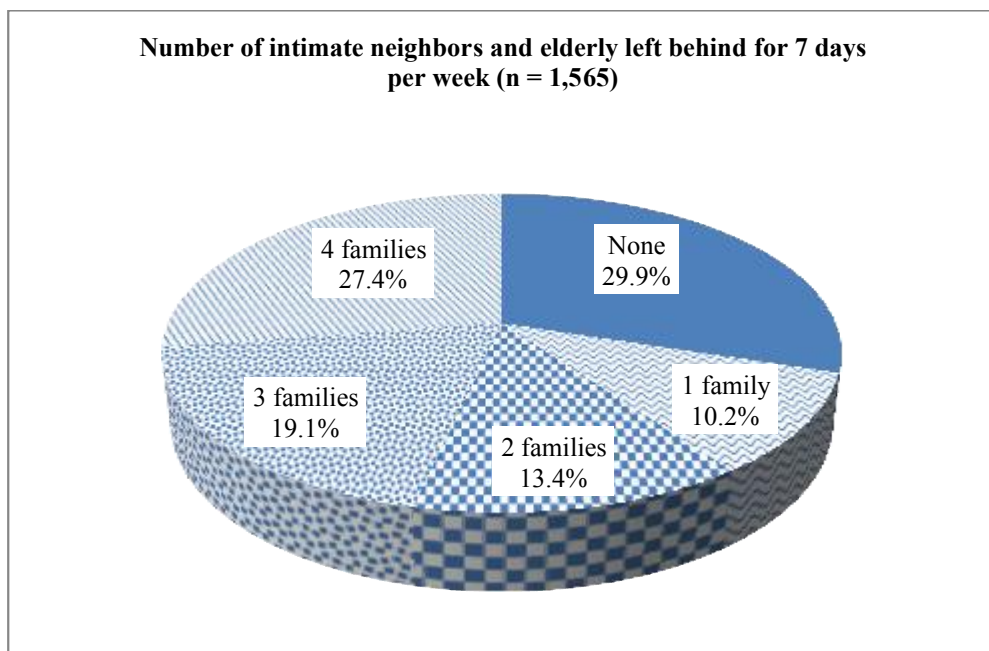
**Chart 5.10 Percentage of the family residence and elderly left behind for 7 days a week**

### **5.8 Number of intimate neighbors and elderly left behind**

Regarding the number of intimate neighbors and elderly left behind, the finding showed that most families had the intimate neighbors for 4 families. The elderly left behind to stay alone at home for 3-4 days and 7 days per week did not have the intimate neighbors. According to Kuttika Thanakwang (2008) who conducted the study at Nan Province, she found that the peer network influenced the health promotion behavior and happy ageing while the network and family support put influence on the elders' happiness. The peer network put both direct and indirect influence on offering supports to the elderly. However, the elderly left behind without intimate neighbors deems a concern of the Thai society as shown in Chart 5.11 and 5.12.



**Chart 5.11 Percentage of the number of intimate neighbors and elderly left behind for 3-4 days a week**



**Chart 5.12 Percentage of the number of intimate neighbors and elderly left behind for 7 days a week**

According to the data analysis on the number of intimate neighbors and elderly left behind by Spearman Rank Correlation Coefficient, the finding showed that the elderly left behind was correlated with the number of intimate neighbors at the statistical significance of 0.05 and the correlation value was negative. This meant that the more the number of intimate neighbors the families had, the lesser the elderly left behind was. This finding was consistent with Wimonthip Musikkapan (2008) that having many neighbors gave the elderly the opportunity to be cared by other people, which also included the neighbors. The study of Chan et al. (2011) pinpointed that the weak external social network was highly correlated with the level of depression, resulted by the leave of male and female elderly behind.

## **CHAPTER VI**

### **CONCLUSION AND SUGGESTION**

The Family Factors And their influence toward the elderly left behind in Thailand aimed at studying the family factors and their influence toward the elderly left behind in Thailand in 3 aspects: family relationship, economy and community from the Project of Well-being Situation among Thai families in 2011 and 2012 by surveying 1,565 families. The data analysis and processing were done by the Statistical Package for Social Sciences. The statistic used in the data analysis was the descriptive statistic, e.g. frequency, percentage, mean, Standard Deviation, Cross Tabulations Table, and Spearman Rank Correlation Coefficient. The results of the research were divided into the following sections:

- 6.1 Conclusion
- 6.2 Limitations of the research
- 6.3 Recommendations of the research

#### **6.1 Conclusion**

In this research, in respect with the family relationship, almost a half of informants had the family relationship at the good level (37.8%), followed by those with the family relationship at the fair level (29.6%). Regarding the family care, almost a half of informants had the family care at the most real level (42.9%), followed by those with the family care at the so real level (38.2%). Regarding the family violence, almost a half of informants had the family violence at the least real level (76.2%), followed by those with the family violence at the slightly real level (12.2%). Regarding the family communications, almost a half of informants had the family communications at the so real level (38.9%), followed by those with the family communications at the most real level (35%).

For the economy factor in respect with family income, over a half of families had the adequate income (91.2%) while another 8.8% did not have the adequate income for their families. Regarding the household debts over a half of families had some debts (63.5%) and another 29.6% had no debts.

For the community factor in respect with the family residence, over a half of families lived in the urban areas (55.7%) and another 44.3% lived in the rural areas. Regarding the number of intimate neighbors, only 31.1% had the intimate neighbors for 4 families. Interestingly, 28.4% of families had no intimate neighbors.

In studying the elderly left behind, the percentage of elderly left behind for 0 day per week reached 28.3%, followed by 3-4 days per week (23%). Interestingly, 10% of the elderly were being left behind at home.

The elderly left behind and the factors relating to family relationship were considered as well, which included the level of family relationship, level of family care, level of family violence, and level of family communications.

For the length of elderly left behind classified by the level of family relationship, the elderly being left behind at home for 0 day per week, obviously, had the good family relationship if compared with the elderly being left behind at home for 7 days per week. However, the elderly being left behind at home for 1-2 days per week, 3-4 days per week and 5-6 days per week had no different level of family relationship.

For the length of elderly left behind classified by the level of family care, most elderly being left behind at home had the level of family care at the so real level. Interestingly, 54.8% of the elderly being left behind at home for 7 days per week had the level of family care at the most real level. This meant that despite the good family care, the elderly being left behind at home for 7 days per week.

For the length of elderly left behind classified by the level of family violence, the family violence and the elderly left behind had the coextensive relationship. That is, in the families with little violence, it was less likely that the elderly were being left behind at home. Adversely, in the families with much violence, it was more likely that the elderly were being left behind at home. Obviously, 8.9% of the elderly being left behind at home for 7 days a week had the level of family

violence at the least real level. This meant that despite the low level of family violence, the elderly left behind still existed.

For the length of elderly left behind classified by the level of family communications, most elderly had the level of family communications at the so real level. Obviously, the elder being left behind at home for 7 days a week had the level of family communications at the most real level.

For the length of elderly left behind classified by the family income, almost all elderly were in the families with adequate income regardless the length they were left behind. More interestingly, 10% of the elderly being left behind at home for 5-6 days and 7 days per week were in the families with inadequate income. This means that about 10% of Thai families had no adequate income for the families; thus, they had to leave the elderly at home to work out, or they tended to leave the elderly behind forever because they did not have the adequate income to care for them. However, in the families with adequate income for the families, 90% of them also left the elderly behind at home for 5-6 days and 7 days per week. It is possible that such adequate income came from working outside every day, and it is necessary to leave the elderly alone at home.

For the length of elderly left behind classified by the household debts, it is interestingly that despite the out-of-debt families, 36.3% of the elderly were being left behind at home. This statistic was quite high, which presented that the elderly left behind could be found in the out-of-debt families. For the indebted families, 65% of the elderly left behind for 5-6 days and 7 days per week.

In studying the correlation between the elderly left behind and the community factors, which involved the family residence and number of intimate neighbors.

The results showed that the families leaving the elderly behind at home, either in urban or rural areas, particularly in urban areas where the elderly in 157 families were left behind for 7 days a week, and 60% of these families were in the urban areas.

For the length of elderly left behind classified by the number of intimate neighbors, most families had the intimate neighbors for 4 families. The elderly being left behind at home for 3-4 days and 7 days a week lived in the families with no intimate neighbors.

In the analysis of correlation between elderly left behind and family factors by Spearman Rank Correlation Coefficient, the independent variables were: 1) level of family relationship; 2) level of family care; 3) level of family violence; 4) level of family communications; and 5) number of intimate neighbors. The dependent variable was the elderly left behind. The result showed that the variable positively correlated with the elderly left behind was the level of family violence ( $r = 0.200$ ) at the statistical significance of 0.01. The variables negatively correlated with the elderly left behind were the level of family relationship ( $r = -0.076$ ) at the statistical significance of 0.01, the number of intimate neighbors ( $r = -0.055$ ) at the statistical significance of 0.05, and the level of family communications ( $r = -0.052$ ) at the statistical significance of 0.05.

For the family care, this variable was not correlated with the elderly left behind.

## **6.2 Limitations of the research**

6.2.1 This research relied on the secondary data from the Project of Well-being Situation among Thai families in 2011. The opinions surveyed came from the family members, not the elderly in their families.

6.2.2 This research involved the elderly at age of 60 years and up. But, these elderly were not grouped by age to identify any differences in each range of age. Therefore, the results may not be precise. For example, the elderly at the early aging are able to care for themselves. Leaving this group of elderly at home cannot be defined as the “elderly left behind”.

## **6.3 Recommendations of the research**

### **6.3.1 Policy suggestions**

1) The results showed that the elderly left behind was correlated with the level of family relationship, level of family violence, and level of family communications. These issues may not be new, but they advise us that the related sectors have not yet been successful in provoking the strong families. The results of this research emphasize that the formation of strong families is the urgent mission to be achieved in order to prepare the Thai society to be the ageing society.

2) The results also showed that the elderly left behind was correlated with the number of intimate neighbors. That is, the more the family has the intimate neighbors, the lesser the elderly will be left behind. This is evident that the neighbors are important to help and care for the elderly. Therefore, the community strength is another urgent mission, and it should be driven to be the national agenda.

### **6.3.2 Recommendations for further study**

1) The data of this research confirmed that many elders were left to rear the grandchildren. However, this issue has not yet been studied profoundly. In fact, there are more elderly who are left to care for other dependent persons such as children, disabled or sick people. This issue and its effect should be studied profoundly.

2) Other independent variables may be added in order to see clearer results caused by such elderly left behind such as health of the elderly, diseases of the elderly, age of the elderly, etc.

3) The classification of elderly by the range of age may be added, e.g. early elderly, middle elderly and late elderly. The analysis based on the range of ages may give clearer results.

## REFERENCES

- Abe, Y. Fujise, N. Fukunaga, R. Nakagawa, Y. & Ikeda, M. (2012). Comparisons of the prevalence of and risk factors for elderly depression between urban and rural populations in Japan. *Int Psychogeriatr*, 24(8), 1235-1241.
- Arai, A. Katsumata, Y. Konno, K. & Tamashiro, H. (2004). Sociodemographic factors associated with incidence of dementia among senior citizens of a small town in Japan. *Care Manag J*, 5(3), 159-165.
- Bilotta, C. Case, A. Nicolini, P. Mauri, S. Castelli, M. & Vergani, C. (2010). Social vulnerability, mental health and correlates of frailty in older outpatients living alone in the community in Italy. *Aging Ment Health*, 14(8), 1024-1036.
- Blozik, E. Wagner, J. T. Gillmann, G. Iliffe, S. von Renteln-Kruse, W. Lubben, J. et al. (2009). Social network assessment in community-dwelling older persons: results from a study of three European populations. *Aging Clin Exp Res*, 21(2), 150-157.
- Buchman, A. S. Boyle, P. A. Wilson, R. S. James, B. D. Leurgans, S. E. Arnold, S. E. et al. (2010). Loneliness and the rate of motor decline in old age: the Rush Memory and Aging Project, a community-based cohort study. *BMC Geriatr*, 10, 77.
- Chan, A. Malhotra, C. Malhotra, R. & Ostbye, T. (2011). Living arrangements, social networks and depressive symptoms among older men and women in Singapore. *Int J Geriatr Psychiatry*, 26(6), 630-639.
- Elliott, S. Painter, J. & Hudson, S. (2009). Living alone and fall risk factors in community-dwelling middle age and older adults. *J Community Health*, 34(4), 301-310.
- Foster, P. & Neville, S. (2010). Women over the age of 85 years who live alone: a descriptive study. *Nurs Pract NZ*, 26(1), 4-13.
- Harry, R. Moody & Jennifer, R. Sasser. (2012). *aging: concepts and controversies*. The United States of America: SAGE Publications.

- Hoyer, W.J. & Roodin, P.A. (2009). *Adult Development and Aging*: McGraw-Hill Education.
- Oswald, F. Wahl, H. W. Schilling, O. & Iwarsson, S. (2007). Housing-related control beliefs and independence in activities of daily living in very old age. *Scand J Occup Ther*, 14(1), 33-43.
- Ramic, E. Pranjic, N. Batic-Mujanovic, O. Karic, E. Alibasic, E. & Lic, A. (2011). The effect of loneliness on malnutrition in elderly population. *Med Arh*, 65(2), 92-95.
- Rapp-Paglicci, L.A. Roberts, A.R. และ Wodarski, J.S. (2002). *Handbook of Violence*. Canada: Wiley.
- Roth, D. L. Haley, W. E. Wadley, V. G. Clay, O. J. & Howard, G. (2007). Race and gender differences in perceived caregiver availability for community-dwelling middle-aged and older adults. *Gerontologist*, 47(6), 721-729.
- Udell, J. A. Steg, P. G. Scirica, B. M. Smith, S. C., Jr. Ohman, E. M. Eagle, K. A. et al. (2012). Living alone and cardiovascular risk in outpatients at risk of or with atherothrombosis. *Arch Intern Med*, 172(14), 1086-1095.
- กระทรวงพัฒนาสังคมและความมั่นคงของมนุษย์. (2553). พระราชบัญญัติผู้สูงอายุ พ.ศ.2546. กรุงเทพมหานคร: สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ, สำนักงานส่งเสริมสวัสดิภาพและพิทักษ์เด็ก เยาวชน ผู้ด้อยโอกาส และผู้สูงอายุ, กระทรวงการพัฒนาสังคมและความมั่นคงของมนุษย์.
- กัตติกา ฐนะขว้าง. (2551). กลไกของเครือข่ายทางสังคมที่มีอิทธิพลต่อการสูงวัยอย่างมีสุขภาวะของผู้สูงอายุไทย ในจังหวัดน่าน. (คุชฎีบัณฑิต), มหาวิทยาลัยมหิดล.
- คณะกรรมการส่งเสริมและประสานงานผู้สูงอายุแห่งชาติ สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ และสำนักงานส่งเสริมสวัสดิภาพและพิทักษ์เด็ก เยาวชน ผู้ด้อยโอกาส คนพิการ และผู้สูงอายุ. (2547). สถานการณ์ผู้สูงอายุไทย พ.ศ. 2547. กรุงเทพฯ: มูลนิธิสถาบันวิจัยและพัฒนาผู้สูงอายุไทย(มส.ผส.).
- คณะกรรมการกิจการสตรี เยาวชน และผู้สูงอายุ วุฒิสภา. (2546). ความรุนแรงต่อผู้สูงอายุในครอบครัว. กรุงเทพมหานคร: กระทรวงพัฒนาสังคมและความมั่นคงของมนุษย์.
- คณะกรรมการพัฒนาครอบครัวและแก้ไขความรุนแรงต่อเด็กและสตรี. (2542). นโยบายและแผนงานในการพัฒนาสถาบันครอบครัว. กรุงเทพมหานคร: คณะกรรมการส่งเสริมและประสานงานสตรีแห่งชาติ (กสส.).

- จิราวรรณ ประภาสุชาติ. (2545). พฤติกรรมของสมาชิกในครอบครัวผู้ซึ่งทำหน้าที่หลักในการดูแลผู้สูงอายุที่เป็นภาระพึ่งพิงในเขตจังหวัดนครราชสีมา. (มหาบัณฑิต), มหาวิทยาลัยมหิดล.
- จุฑารัตน์ เอื้ออำนวย. (2551). จิตวิทยาสังคม. กรุงเทพมหานคร: จุฬาลงกรณ์มหาวิทยาลัย.
- ชาย โพธิ์สิตา. (2554). การเปลี่ยนแปลงครอบครัวและครัวเรือนไทย: เรา (ไม่) รู้อะไร? ประชากรและสังคม.
- โซเฟีย อาแวน. (2546). การศึกษาผู้สูงอายุที่อาศัยอยู่โดยลำพัง: ข้อค้นพบจากโครงการกาญจนบุรี. (มหาบัณฑิต), มหาวิทยาลัยมหิดล.
- ทวีศักดิ์ หล้าภูเขียว. (2546). การได้รับการดูแลจากครอบครัวผู้สูงอายุในเขตเทศบาลตำบลหนองหินกิ่งอำเภอหนองหิน จังหวัดเลย. (มหาบัณฑิต), สถาบันราชภัฏเลย.
- บรรลุ ศิริพานิช. (2545). คู่มือผู้สูงอายุฉบับสมบูรณ์. กรุงเทพมหานคร: หมอชาวบ้าน.
- บรรลุ ศิริพานิช สมศักดิ์ ชุณหรัศมิ์ ลัดดา คำวิภากรเลิศ วรรณฐา แก้วเกตุ และจุฑารัตน์ ทนันไชย. (2553). สถานการณ์ผู้สูงอายุไทย พ.ศ.2553. กรุงเทพมหานคร: มูลนิธิสถาบันวิจัยและพัฒนาผู้สูงอายุไทย (มส.ผส.).
- ประทีป ไอยสุรย์ และทิวากร แก้วมณี. (2554). การประเมินมาตรฐานคุณภาพชีวิตผู้สูงอายุกรณีศึกษา : เทศบาลตำบลหัวดง อำเภอเมือง จังหวัดพิจิตร สังคมศาสตร์.
- พรทิพย์ มาลาธรรม จิราพร คงเอี่ยม และประคอง อินทรสมบัติ. (2552). ความสัมพันธ์ระหว่างแรงสนับสนุนจากครอบครัวและแรงสนับสนุนจากเพื่อนกับความพึงพอใจในชีวิตของผู้สูงอายุในชนบท. พยาบาลราชภัฏ, 15(3), 432-448.
- พรรณี สมเทศน์. (2550). การดูแลผู้สูงอายุในระดับครอบครัว: กรณีศึกษาบ้านนาศรีดงเค็ง ตำบลสะอาด อำเภอน้ำพอง จังหวัดขอนแก่น. (มหาบัณฑิต), มหาวิทยาลัยราชภัฏเลย.
- พวงทอง ไกรพิบูลย์. (2553). ผู้สูงอายุ (Older person). เข้าถึงเมื่อ 9 ตุลาคม 2555, เข้าถึงจากโรงพยาบาลบำรุงราษฎร์ <http://www.http://haamor.com/th/ผู้สูงอายุ/>
- เพ็ญศรี หลินสุวรรณนท์. (2543). การศึกษาความซึมเศร้าของผู้สูงอายุแขวงรอบเมือง เขตปทุมวัน กรุงเทพมหานคร. (มหาบัณฑิต), มหาวิทยาลัยมหิดล.
- เพื่อนใจ รัตตากร. (2540). กิจกรรมบำบัดในผู้สูงอายุ. เชียงใหม่: ภาควิชากิจกรรมบำบัด คณะเทคนิคการแพทย์ มหาวิทยาลัยเชียงใหม่.
- มติสมัชชาสุขภาพแห่งชาติ. (2552). การพัฒนาระบบการดูแลระยะยาว สำหรับผู้สูงอายุที่อยู่ในภาวะพึ่งพิง (พิมพ์ครั้งที่ 2).

- มรรยาท รุจิวิทย์. (2547). ความรุนแรงต่อผู้สูงอายุในครอบครัวในอำเภอบ้านเขว้า จังหวัดชัยภูมิ. วารสารสุขภาพจิตแห่งประเทศไทย, 12(1), 21.
- ยุคลณี กังศศิเทียม. (2547). ลักษณะโครงสร้างครัวเรือนและสถานภาพการทำงานของผู้สูงอายุ. (มหำบัณฑิต), มหาวิทยาลัยมหิดล.
- เล็ก สมบัติ. (2549). โครงการภาวะการดูแลผู้สูงอายุของครอบครัวในปัจจุบัน. กรุงเทพฯ: มิสเตอร์ ก้อบปี (ประเทศไทย).
- วิชัย เสนอชุ่ม พุฒินันท์ สุฤทธิ ฌรงค์ศักดิ์ หนูสอน และชนันช กนกเทศ. (2554). ปัจจัยพยากรณ์ บทบาทของสมาชิกครอบครัวในการดูแลและส่งเสริมสุขภาพผู้สูงอายุ ตำบลพะวง อำเภอแม่สอด จังหวัดตาก. วารสารการพยาบาลและสุขภาพ, 2(5), 23-33.
- วิมลทิพย์ มุสิกพันธ์. (2551). อิทธิพลของการความหนาแน่นของบ้านเรือนที่มีผลต่อการย้ายถิ่นออก ของประชากรวัยแรงงาน และการจัดสภาพการอยู่อาศัยของประชากรวัยสูงอายุและ เด็ก. (คุยภูบีบัณฑิต), มหาวิทยาลัยมหิดล.
- ศรีเรือน แก้วกั้งวาล. (2549). จิตวิทยาพัฒนาการชีวิตทุกช่วงวัย. กรุงเทพมหานคร: มหาวิทยาลัยธรรมศาสตร์.
- ศศิพัฒน์ ยอดเพชร. (2544). การเกื้อหนุนทางสังคมแก่ผู้สูงอายุ : พื้นที่การศึกษาในเขตภาคใต้. กรุงเทพฯ: มหาวิทยาลัยมหิดล และ คณะสังคมสงเคราะห์ศาสตร์ มหาวิทยาลัยธรรมศาสตร์.
- ศูนย์วิชาการ สำนักงานกองทุนสนับสนุนการสร้างเสริมสุขภาพ. (2553). เหลียวหลัง แลหน้า มองอนาคต "สังคมสูงวัย". กรุงเทพมหานคร: สำนักงานกองทุนสนับสนุนการสร้างเสริมสุขภาพ.
- สำนักงานกิจการสตรีและสถาบันครอบครัว. (2550). นโยบายและยุทธศาสตร์การพัฒนาสถาบันครอบครัว พ.ศ. 2547-2556. กรุงเทพมหานคร: กระทรวงการพัฒนาสังคมและความมั่นคงของมนุษย์.
- สำนักงานสถิติแห่งชาติ. (2550). รายงานการสำรวจประชากรสูงอายุในประเทศไทย พ.ศ. 2550. กรุงเทพมหานคร.
- สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ สำนักงานส่งเสริมสวัสดิภาพและพิทักษ์เด็ก เยาวชน ผู้ด้อยโอกาส และผู้สูงอายุ และกระทรวงการพัฒนาสังคมและความมั่นคงของมนุษย์. (2555a). คู่มือการดำเนินงานด้านการจัดสภาพแวดล้อมที่เหมาะสมสำหรับผู้สูงอายุ. กรุงเทพมหานคร.

- สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ สำนักงานส่งเสริมสวัสดิภาพและพิทักษ์เด็ก เยาวชน ผู้ด้อยโอกาส และผู้สูงอายุ และกระทรวงการพัฒนาสังคมและความมั่นคงของมนุษย์. (2555b). คู่มือแนวทางการจัดการปัญหาความรุนแรงต่อผู้สูงอายุ. กรุงเทพมหานคร.
- สิรินทร์ญา ไช้เจียว และชไมพร กาญจนกิจสกุล. (2553). ปัจจัยที่มีอิทธิพลต่อภาวะความสุขของผู้สูงอายุไทยที่มีรูปแบบการอยู่อาศัยแบบอยู่คนเดียว. เอกสาร การประชุมวิชาการประชากรศาสตร์แห่งชาติ.
- สุนทรี พัวเวส. (2555). แผนกลยุทธ์ สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ (สทส.) ปี พ.ศ. 2555. กรุงเทพมหานคร: สำนักส่งเสริมและพิทักษ์ผู้สูงอายุ (สทส.).
- สุริยาภรณ์ อินทรภิรมย์ ชวพรพรรณ จันท์ประสิทธิ์ และทัศนาศูววรรณปะภรณ์. (2551). การดูแลตนเองของผู้สูงอายุที่อาศัยเพียงลำพังในจังหวัดสุราษฎร์ธานี. พยาบาล, 35(4), 46-56.
- อุทัยทิพย์ รักรรยาบรรณ. (2549). การเกื้อหนุนของครอบครัวต่อผู้สูงอายุไทย. เอกสาร การประชุมวิชาการประชากรศาสตร์แห่งชาติ 2549.

## **BIOGRAPHY**

<b>NAME</b>	Angsana Chuchuay
<b>DATE OF BIRTH</b>	24 September 1987
<b>PLACE OF BIRTH</b>	Songkhla, Thailand
<b>INSTITUTIONS ATTENDED</b>	Chiang Mai University, 2006-2009 Bachelor of Science (Occupational Therapy) Mahidol University, 2011-2013 Master of Science (Human Development)
<b>ADDRESS</b>	142/2 Phatkasam Road, Khuha Sawan, Mueang, Phatthalung 93000, Thailand. Tel. 089-5997811 E-mail: <a href="mailto:angsana_chu@hotmail.com">angsana_chu@hotmail.com</a>