

**PARENTAL CAREGIVING AMONG THE SANDWICH
GENERATION IN BANGKOK METROPOLITAN AREA**

Orathai Vejbhumi

**A Dissertation Submitted in Partial
Fulfillment of the Requirement for the Degree of
Doctor of Philosophy (Population and Development)
School of Applied Statistics
National Institute of Development Administration
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The Examining Committee Approved This Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (Population and Development).

Associate Professor *Chai Podhisita* Committee Chairperson
(Chai Podhisita, Ph.D.)

Associate Professor..... *Duanpen Theerawanviwat*..... Major Advisor
(Duanpen Theerawanviwat, Ph.D.)

Associate Professor..... *Pachitjanut Siripanich*..... Co-Advisor
(Pachitjanut Siripanich, Ph.D.)

Assistant Professor..... *Dararatt Anantanasuwong*..... Committee
(Dararatt Anantanasuwong, Ph.D.)

Associate Professor..... *Surapong Auwatanamongkol*..... Dean
(Surapong Auwatanamongkol, Ph.D.)

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ABSTRACT

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Author	Miss Orathai Vejbhumi
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The objectives of this study are; first, to describe parent caregiving of the sandwich generation; second, to study intergenerational support between the sandwich generation and their parents and third, to analyze factors influencing the sandwich generation's parent care behavior. Data was collected from sample representing the target population through face-to-face interview. The unit of analysis was individuals, both male and female, aged between 35-55 years old, who are categorized as having sandwich generation characteristics. The samples were selected by multi-stage stratified random sampling method. Descriptive statistics and the hierarchical multiple regression analysis were used to analyze parent caregiving of the sandwich generation.

It was found that females provide more of physical care to their parents than males do but for emotional care, males sandwich generation give more this care to their parents than their female counterparts. Nearly half of the sandwich generation in both groups give 1-5% of their income to their parents. Whether or not the sandwich generation has siblings, if they live with their parents, they are the primary caregivers. The caregiving and support between the sandwich generation and their parents is rather reciprocal than unidirectional. The co-residence between the sandwich generation and the parents is an important factor enabling the parents to obtain care from their children, all of which is clearly in contrast to the parents living separately from the sandwich generation. The sandwich generation members who are the only child have to assume nearly all aspects of the primary caregiver's role which means

bearing a heavier burden than the sandwich generation members who have sibling(s). In addition, their parents have to take care of themselves to a larger degree than parents with many children. Financial support to parents is the only caregiving in which the siblings take part the most compared to other types of caregiving. Among the sandwich generation members who have sibling(s), the parental caregiving from brother(s) or sister(s) has no influence on all three types of care provision. The value of gratitude is the most important reason for parental care provision by the Thai sandwich generation as found in this study.

This research suggested that government should help the elderly in the informal and unskilled labor force. Social welfare should provide funds to help the elderly poor both financially and through welfare, promoting the employment of the elderly in non-physically punishing job. The government should have long-term policies to deal with the increasing number of the single-child families because the parental caregiving falls heavily on the single child of the family, and the parents have to take care of themselves more than those having several children. The government should have a welfare policy emphasizing income security and health protection so that the elderly parents can still have their own autonomy and be in stable relationships with their children.

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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

Within the family unit the aspect of caring - or care receiving- plays an important role in the life of the elderly. Despite being the smallest social unit, the family is extremely essential to its individual members. As progress in medical science and nutrition result in a longer human life span compared to previous generations, relationships within the family have subsequently become longer as well. As the overall number of aged population increases, the families' roles of providing support and care to them - especially when being the primary caregiver - also becomes more valuable. In response to such changes care provision for elderly parents is therefore a significant task for members of the family and will become increasingly more meaningful in the future as a more challenging role for both families and societies as a whole in the 21st century (Delgado and Tennstedt, 1997).

In Thailand the overall number as well as the proportion of the elderly population increases continuously. By 2010 the number of the elderly will increase to 7.6 million or 11.4 percent of the country's total population. By 2025 their number will rise to 19.9 percent (Noppawan Jongwattana et al., 1998). Apparently the number of elderly people in the next twenty years - when compared to that of 2005 - will increase by almost double. Therefore, care provision for the elderly will be an important issue in the 21st century, similar to the relevance attached to the aspect of childcare over previous decades (Ruddock, 2000).

A lot of research previously conducted has affirmed that families play an integral and essential role in care provision for the elderly (Neuharth and Stern, 2000). Nearly 90 percent of such care is provided by members of the families, especially care for chronically sick old people (Martire, 2003). The number of people vulnerable to chronic illnesses and therefore unable to look after themselves, has increased rapidly,

coupled with their tendency to live longer than before, necessitating and implying a rising need for assistance from their families.

In giving care to the elderly, families are both coordinators and providers (Feinberg, 2002). Particularly in developing countries, members of the families are important primary caregiver to elderly parents, rather than relying on state welfare. In developed countries, however, families still play important roles in elder caregiving despite state welfare being able to respond more effectively to their needs. Even though caregiving undertaken within the family unit helps reduce the state welfare burden, it aggravates the burden placed on the caregivers themselves, especially with primary care providers often being middle-aged women who have many other roles and functions, for example being housewives, mothers or daughters and also having to work for a living. Nowadays, as women stay in the labor market longer than they did in the past, they have to bear a much heavier burden as a result.

The term “sandwich generation” is used to call and describe the middle-aged population segment which has to take care of members of the families - children younger than 18 years old as well as aging parents. The sandwich generation is therefore a sub-group of informal caregiver and more vulnerable to be affected than other informal caregivers - be it emotionally, physically or financially - by their involvement in care activities. It also has to face continuous change and be prepared for its own upcoming retirement. It is estimated that this population group will increase as a consequence of the present population’s longer life span and also due to a large number of women having children much later than before. Moreover, the tendency of the sandwich generation’s longer life span will increase the risk of having health and financial problems as a result of intergenerational family care provision (Horton et al., 2001).

The sandwich generation’s role in old age care has more and more become an issue of interest. Caring for elderly parents is an unexpected career which is really a heavy burden on children, particularly adult children who are primary caregivers (Miller, 1998) because they have to devote both time and resources to take care of the parents (Mack and Thompson, 2005). Research has found that elderly parents normally state that their adult children are their caregivers and are the first reliable persons of contact when they need assistance, coming second only to the elder’s own

spouse (Connisdis and Davies, 1990; Hogan and Eggebeen, 1995; Antonucci et al., 1998). According to the report of the National Statistical office (NSO) on elderly census in Thailand in 2002, it was found that married children are the most important supporter group of the aged population in general.

Caregiving for aged parents is a long-term activity, particularly for incapacitated or chronically ill parents (Montgomery and Kosloski, 2001). The primary caregiving children have to take on various responsibilities such as financial or material assistance as well as allocating sufficient time. These responsibilities will increase continually. Moreover, the children have to partly adjust their life to realign it with their commitment to care provision for their aging parents (Smith, 2005). Despite of how much they love and are attached to their parents, the primary care giving children are often negatively affected by weariness, tension, pressures and financial problems. The sandwich generation in particular, having many roles simultaneously - such as working, taking care of their own family, raising children and taking care of aging parents, is affected, as a result, by significant pressures.

The impact of parental old age care is not totally negative, though. The care provision to parents creates positive relationships in the family, feelings of family closeness and the mutual sharing of feelings and experiences. The caregivers will have a sense of pride and self-esteem, and be accepted by society (Martire, 2003).

As mentioned above, the sandwich generation is regarded as the primary caregiver for aging parents. It carries the heavy and extensive task of caregiving. This study is interested in conducting a research study into the patterns of parental care provision, including both positive and negative factors which relate to parental caregiving of the sandwich generation. In this context the study presents the behavioral pattern relating to parental care provision as three distinct types: physical care, emotional care and, finally, financial support. It also determines those factors which influence the three types of parent caregiving. Consequently, the author will recommend a service which responds to the needs and requirements of the sandwich generation. This will include support for a proactive service system for the sandwich generation. It will, therefore, enhance the good quality of life for both the caregivers as well as the recipients of care themselves.

1.2 Research Questions

The present study is conducted to answer the following questions:

- 1) Which of the three types of parental caregiving : physical care, emotional care and financial support predominates amongst the sandwich generation?.
- 2) What factors explain each type of parental care provision of different characteristics?
- 3) Is there a reciprocal support between the sandwich generation and their parents?

1.3 Objectives of the Study

The objectives of the study consist of the following

- 1) To compare various types of parent caregiving of the sandwich generation according to their living arrangement and number of sibling.
- 2) To analyze factors influencing the sandwich generation's parent care.
- 3) To examine intergenerational support between the sandwich generation and their parents

1.4 Scope of the Study

1) This study comprises cross-sectional research, aiming to examine the sandwich generation, both male and female, aged between 35-55 years old, who are - at the time of interview - categorized as having sandwich generation characteristics, i.e. taking care of father and/or mother whose age is over 65 years old and at the same time raising at least one child younger than 18 years old. The studied population are the inhabitants of Bangkok metropolitan area who have been resident for at least one year. They are either living with their parents or living separately.

2) Studied population include both primary and secondary care providers to elderly parents. The respondents must have already taken care of their parents for a period of at least one year.

1.5 Operational Definitions

1) **Parent(s)** means the biological parent(s) only.

2) **Sandwich generation** means males or females aged between 35-55 years old and having already taken care of the parent(s) for at least 1 year prior to the period of data collection, as well as raising at least one child younger than 18 years old. They are either living with their parents or living separately.

3) **Parental caregiving** means the sandwich generation providing care to the parents in following patterns:

(1) **Physical care** means taking care of routine activities and is divided further into 3 types: personal care, providing meals as well as domestic chores.

(2) **Emotional care** means giving emotional warmth and mental security to the parents. It is divided into 2 types: 1. Accompanied transportation, for example taking parents on trips, doctor visits, to the temple, to meet friends and to go shopping. 2. Conversation with parents.

(3) **Financial support** means support in money terms towards parental living expenses, i.e. expenses for food, housing, medical care, clothing, etc. Financial support is divided into 2 types: monthly as well as occasional expenditures.

4) **Primary caregiver** means the person who is in charge of parental care. There are three types of caring: physical care, emotional caregiving and financial support.

5) **Secondary caregiver** means the person who takes care of the parents occasionally as well as helping the primary caregiver(s) to take care of the parents.

6) **Parents assistance** means support provided by parents to the sandwich generation, divided into 3 types; grandchild care, counseling and financial support.

7) **Living arrangements** means the sandwich generation's residence which is divided into 2 types; non-co-resident with parents and co-resident with parents, which is divided further into 2 sub-types: co-resident with parents in the sandwich generation's house and co-resident with parents in the parents' house.

1.6 Limitations of the Study

For the purposes of this study the collection of specific data covering the sandwich generation is limited to the population segment of Bangkok Metropolitan area. It does not cover the sandwich generation in other regions of Thailand.

1.7 Expected Benefits of the Study

The expected results obtained from this study are likely to create an understanding of patterns of parental caregiving amongst the sandwich generation in the Bangkok Metropolitan and will deliver the following benefits:

- 1) A planning guideline for policy-making for different projects targeted at helping families responsible for taking care of aging parents; furthermore, to assist members of the families in their ability to take care of their parents whilst maintaining a good quality of life both for the caregivers as well as recipients of care.
- 2) A guideline to enhance factors leading to positive impacts as well as to prevent factors resulting in negative impacts on the sandwich generation which trend to be increasing in number in the future.
- 3) To increase the theoretical knowledge about parent caregiving by the sandwich generation in urban areas, thereby benefiting others wishing to supplement or undertake similar studies in the future.

1.8 Organization of Presentation

This research study is reported into six chapters.

Chapter 1 points to the importance of the study, its objectives, scope of the study, the operational definitions, limitations of the study and the expected benefits of the study.

Chapter 2 describes the theories, concepts and research related to patterns of parent caregiving by the so-named sandwich generation as well as conceptual framework of the study.

Chapter 3 concerns the research methodology, consisting of the population and selected sample, data collection, the instrument for collecting data and the test of its validity and reliability, the measurement of variables, the statistical technique in data analysis and the background characteristics of respondents.

Chapter 4 describes the results of the study on parent care provision, the patterns of parent caregiving in three types: daily practical activities of care, emotional caring and financial support. The last section is concerned with the intergenerational support between the sandwich generation and their elderly parents.

Chapter 5 presents the analysis of the factors determining the patterns of parent caregiving by the sandwich generation.

At the last chapter (Chapter 6) the author summarizes the research finding and recommendations, not only for future research but also for policy strategies which concerns the parental caregiving of the sandwich generation in Bangkok Metropolitan Area.

CHAPTER 2

REVIEW OF LITERATURES

The purpose of this chapter is to review the related literature, theories, concepts and key factors subsequently influencing on the topic of care provision for parents. The review also serves the purpose of deriving a conceptual framework for the study. It comprises six parts: theories related to caregiving within families, important concept related to parental caregiving, concept concerning the so-called sandwich generation, factors influencing caregiving for the elderly parents, elderly parents caregiving among siblings and research framework.

2.1 Theories Related to Caregiving within Families

Theories related to caregiving within families employed in this study are the following: Intergenerational wealth flow; Bargaining Model; Intergenerational exchange theory; and the Altruistic model.

2.1.1 Intergenerational Wealth Flow Theory

Wealth flow theory relates demographic transition to the change in the direction of families' intergenerational wealth transfer, and also describes the shift in parental motivation to have children, from economic to psychic advantage as a phenomenon accompanying socio-economic development and modernization (Caldwell, 1976: 343). Wealth was defined as 'all the money, goods, services and guarantees' that one person provides to another (Caldwell et al., 1982). Two main forms of intergenerational wealth flows are upward wealth flow and downward wealth flow.

The net upward wealth flow exists in 'primitive' and 'traditional' societies, where an economically rational decision is to have as many children as possible (within biological constraints); because the more children are born the more

possibilities and opportunities exist to gain an improvement in the overall well-being. Moreover, this upward wealth flow to the older generation is both a strong social sanction and an expected tribute based in religious belief. On the other hand, in developed societies, the direction of wealth flow in families is downward: parents are expected to provide economic well-being for their children. In these societies the economically rational decision concerning children is to either have no child or, at the most, the smallest possible number of children, depending on the psychological disposition the parents derive from having children and being parents. In such societies parents will invest in their children, for example in education, which is a factor in causing a reversal of the traditional flow of wealth. Payment for the children's education is not only an investment but is also based on other motivations, namely parent pride, family honor, as well as to enhance a child's value when it comes to seeking a partner to marry. In order to enable and encourage the children to reach their highest educational potential, parents must have fewer children spaced well apart. The worldwide transition from high to low fertility is thus a result of the change in family wealth transfer from an upward to a downward flow.

According to wealth flow theory, parents are to receive economic support from their children during their old age. In pre-modern societies parents valued the children as their security. In the case of the elderly having no children at all, it is generally acknowledged that they face almost insurmountable problems in converting surpluses from their young adulthood into support for their old age. Moreover, parents are uncertain about both their ability to be self-supporting during their old age or whether other more reliable or effective means of support are available, other than their own children (Nugent, 1985: 78). So to obtain such support necessitates investment in people, especially in children (Caldwell, 2005: 735). Such prospects consequently motivate high fertility rates in traditional societies where adult children are expected to support their aging parents (Clay Vander and Jane, 1993). Children are therefore guarantors for safety and security which they sometimes undoubtedly provide for their parents. This can be an important source of motivation for high fertility rates in societies lacking alternatives (Turke, 1991: 697). Old age security was correlated with high fertility, for example, in Indonesia, with high fertility being regarded as a better option of receiving old age support.

Apart from the number of children acting as guarantors of security during old age, their loyalty is another factor the parents must consider in making decisions on their desired number of offspring. As changes impact on traditional family structures, the children's bond to their parents may diminish, but this does not necessarily mean that old-age security as a motive to have many children declines concomitantly. On the contrary, it has been suggested that the low rate of return on investment in children may surprisingly increase fertility in the absence of other support mechanisms. Where loyalty is high, one or two children may meet old-age security needs, but where loyalty is low, a higher or the highest possible number of children may be desired in order to meet even minimal needs of the parents in their old age. Therefore, higher numbers of children are generally regarded as offering more security during old age than individuals with few or no children at all.

The rapid economic growth, especially industrial development, needs an increasingly skilled labor force and much more so than during agriculture-based economic times. Families therefore respond to such needs by shifting the resource transfer from older to the younger generation toward investments in human capital instead. This widely practiced spread shifting, which results in the children attaining a higher level of education, means that most children are potentially much wealthier than their parents. Most importantly, the parents also want to harvest or benefit afterwards from what they have invested in their children as compensation in the form of old-age support, repayment of loans, or help during illness.

However, the weakness of the wealth flow theory is its lack of testability: there is neither any direct qualitative evidence of net upward wealth flow in traditional high-fertility societies, nor are there well-specified theoretical foundations for the determination of families' wealth flow. The two theoretical fertility regimes (unrestricted fertility versus childlessness) are too simplistic and Caldwell failed to consider the importance of cross-sex wealth flow from women to men in pre-transition societies. Furthermore, there is research available contradicting the wealth flow theory. For example, Lee et al., (1994) found in a study that intergenerational wealth flow took the opposite direction to Caldwell's hypothesis. Lee found that the net resource flow within families was towards the children. Wealth flow has been downward from the older to the younger generations in traditional societies, and

upward from younger to older generation in modern societies. For example, when studying a group of Mayan agriculturists in Yucatan, Mexico, he found that Maya children consumed more than they produced while living in their parents' households, and therefore had a negative asset value from a narrow economic point of view.

Although the flaw in intergenerational wealth flow theory has weak points - as described above - this theory can still clearly explain the relationships between social change and fertility with parent caregiving. Thailand, for example, according to the surveys of the National Statistical Office (NSO) in 1988 and 1993 (Knodel et al., 1996) shows an interesting tendency regarding preference as to the family size: it was found that the number of married women in their reproductive age bracket desiring to have two children has increased, i.e. those who wanted to have two children has increased from only 19% in 1967-1970 to 64% in 1993. Even the number of women younger than 30 years old preferring to have two children also increased from 23% to 74%.

Generally, in Thai society, parents live with any of their children. If families are small in size, support for the parents consequently falls more on the cohabiting children, i.e. those living with the parents. However, a decrease in the number of children does not necessarily mean a proportionate decrease in the support provided: the lower the number of children the more chance the parents have to invest in them, which in turn will enable them a better chance in life, and thereby be able to repay more to their parents. Another reason is that the sense of obligation to provide support to parents may be inversely associated with the number of siblings available, i.e. the more children the weaker the sense of obligation.

Traditionally, the elderly in Thailand live in their own homes from the start of their marriage. They must have at least one child living with them as this is considered an important characteristic of intra-family support and caring for the elderly. The study of Knodel et al., (1992) found that 77% of the elderly lived with at least one child (step-children and adopted children included). But as the overall size of the family preferred by Thai people has become smaller, the chance of living with (or in close proximity to) an adult child has also diminished. Having only one child appears to present more serious implications and, of course, eliminates the possibility of support altogether. Nonetheless, the non-cohabiting children are still expected to

support the parents, especially, the parents who live with neither of them. If the parents live with children, the non-coresident support remains very important for the parents' well-being because it alleviates the burden on the coresident children. A survey found that 56% of the elderly received regular support in the form of food and/or clothes from non-cohabiting children, and 58% of elderly parents received financial support from non-coresident children (Knodel and Nopaporn Chayovan, 1997). The outcome of this study demonstrates clearly that elderly parents do not only receive support from children living together with them, but also receive material support from children living separately, which is in fact the predominant pattern found all over Thailand.

Even though living together is essential for the children's parent caregiving, such patterns of living may nevertheless cause certain problems, e.g. the feeling of being restricted in space, loneliness or being rejected, or insufficient money for expenses etc. Elderly parents, who have a wider choice of children to live with, might be able to reduce such problems by choosing the most suitable child. But the SECAPT survey results from 1986 suggest no consistent causal relationship between the number of living children and the percentage of elderly having problems of living with a child. A wider choice of children to live with is likely to have a relatively small effect on the parents' satisfaction when compared to their other major concerns in old age. So a decline in fertility is unlikely to adversely affect the parents' level of content concerning their living arrangements in the future.

The phenomenon of a declining fertility rate, which affects the likelihood of support for the elderly, also occurs in other countries. In China, for example, the one-child policy in the late 1970s and early 1980s caused the sharpest decline in the total fertility rate to below replacement level (Liu 1988; Yuan et al., 1992), consequently affecting traditional support for elderly people. Future generations may expect less support as a result of the decline in the availability of children (Zimmer and Kwong, 2003: 23). However, there is a difference in the fertility rate between urban and rural areas because the elderly living in urban areas can access the state's welfare or other support more easily than the elderly in rural areas. Therefore parents in rural areas have to rely much more on their children so that the fertility rate has remained higher in rural areas of China (Zhenghua and Lingguang, 2000). Therefore the scarcity of the

state's welfare - or its inaccessibility - has the intergenerational wealth flow between parents and their children remain in an upward direction. But there are research results contradicting the concept that a fertility rate decline has the elderly receive less support. For example, Lee and Xiao (1998) have found in a study that the remittances which adult children send to their parents depend on the necessities and desires of the parents rather than family size (Zimmer and Kwong, 2003). In the next generation, a decline in fertility alone will not lead to the collapse of the traditional support system; the support for parents having one or two children is not substantially different from the probability for those with more than two children, at least for fundamental and basic support and assistance.

In developed countries such as Singapore, fertility rates have declined very rapidly and fallen below replacement level. As a developed country, the intergenerational wealth flow running in an upward directional pattern is not that important to elderly parents despite some economic help from children still being expected if the parents are in need of it. Furthermore, there is the typical Chinese expectation of living with a son when they are old. Singaporeans value their children for emotional and psychological reasons rather than for utilitarian or economic reasons. Most Singaporeans do not expect to rely on their children for old-age support because they have personal savings as their main source of income. Therefore, they have less need for a large number of children (Hill and Lian, 1995). The generally perceived disadvantages of having children are 'emotional costs'. It is a tradeoff between having children and gaining pleasure from non-family related activities. Children are regarded as being in competition with other goals, consumption of goods, or activities, and such alternatives are to a substantial degree linked to a modern, urbanized lifestyle.

Besides the study on the number of children affecting the provision of care to elderly parents, there are still the questions about who is responsible for caregiving for childless elderly people, particularly in developing countries where there is insufficient welfare for the aged population. This would certainly pose an interesting topic for future research.

The intergenerational wealth flow theory describes the direction of wealth flow between parents and children, stating that the flow direction depends on each

individual society's characteristics. The power and bargaining model describes the flow of wealth originating from the power of controlling a family's resources. The details of this concept are outlined as follows.

2.1.2 Power and Bargaining Model

The Power and Bargaining model explains the relationship of power of, and control over family resources, determining the winners and losers in the struggle for family resources.

The older generation receives support as long as they control important resources such as land and knowledge. The impact of socio-economic development not only falls on the reverse of wealth flow, as mentioned above, but it also causes the parental loss of control over land, business and child rearing. Since socio-economic development enhances the young generation's potential in that they can work outside, as well as their technical and scientific capabilities encouraging them to be more liberal, this will lead to a decline in power and roles wielded and occupied by older family members. From the young generations' point of view, the rise in personal resources allows them to exempt themselves from time-intensive support tasks and obligations (Hermalin et al., 1990). Parents who have more resources could bargain for more services from their children. In modern, western societies, wealthy parents have power to extract children's attention and support (Bernheim et al., 1985). Similarly, in some developing countries, parents who have livestock, receive remittances from their children living separately in towns to a larger degree than poorer parents do. The examples mentioned above demonstrate the important roles of "prospective exchange" as a bargaining element in current family support patterns.

There is also the intergenerational exchange theory as well as the altruistic model, which has a different concept from the intergenerational wealth flow, especially with regard to the motivation underpinning the support provided. Children have various motivations to offer parent care. Two types of motivation have mainly been examined in the literature of economics, one being based on exchange, the other on altruism. The concepts of these theories are outlined as follows:

2.1.3 Intergenerational Exchange theory

Intergenerational exchange means any transfer of material goods, money, or emotional support from able persons to those who need help within the same kin group, but of different generation (Hedberg, 2004).

Although intergenerational exchange is often thought of as a transfer from young to old (Lee and Ellitrope, 1982; Cox and Rank, 1992; Eggebeen, 1992; Hogan, Eggebeen and Clogg, 1993;), typically, the flow of support is not one-directional from adult child to older parent, but rather, there are reciprocal exchanges (Velkoff, 1998). The elderly parents, with advancing age, accept the beneficence of their children and depend on them. The providing of services by older people to their adult children increases the probability that they will receive help from their adult children too (Kunemund and Rein, 1999). The balance of support exchange is likely to be affected by a decline in resources, which both decrease the ability to provide, and increase the need for receiving assistance (Dowd, 1980).

Hypothetical “parent repayment” emphasizes borrowing rather than saving constraints, with the theory postulating that there is an implicit family capital market in which parents finance human capital investments in their children through a combination of grants and loans - with the children, in return, implicitly repaying the loan component by providing old age support for their parents (Lillard and Willis, 1997).

There are many factors related to intergenerational exchanges, for example, gender. From the perspective of the children, daughters of older parents have been reported as providing large, more diverse amounts of assistance than do sons (Coward and Dwyer, 1990; Rossi and Rossi, 1990; Spitze and Logan, 1990). Caregivers receive more help from their mothers than from their fathers, and when helping older mothers, caregivers are more likely to be involved in reciprocal exchanges. They both give and receive more help in relation to their mothers as compared to their fathers (Ingersoll-Dayton et al., 1996). Moreover, elderly women tend to be more emotionally attached to their children and, hence, they are expected to be more frequently involved in intergenerational support exchange than elderly males (Shi, 1993). Apart from gender, the marital status of elderly parents was also considered. Widowed aging parents are more in need of support than married parents (Lopata, 1979; Stoller and Earl, 1983). Moreover, widowed parents tend to

receive more assistance than they provide to their children, while married parents tend to give more assistance than they receive. Apart from the parents' marital status, the married status of adult children also determines intergenerational exchange as well, with married sons being less likely to be engaged in support exchanges with their elderly parents, while parents are more likely to provide financial assistance to previously married daughters (Hoyert, 1991). Middle-aged, unmarried daughters gave three times more help to their elderly mother than married daughters (Lang and Brody, 1983). The number of living children is another important factor determining intergenerational exchange patterns. The more children elderly parents have, the more support and assistance they are likely to obtain from their children (Kivett and Maxime, 1984, Lee and Ellithorpe, 1982). The number of adult children is also a strong, positive factor associated with both giving and receiving most forms of support (Eggebeen, 1992) but, in general, one child only usually takes on the role of the primary care giver (Horowitz, 1985a). Furthermore, the study of Giles and Mu (2005) about parent health and children's migration decision-making, based on sample studies from rural areas, found that the elderly but poor parents' health is not affected by some of their children migrating to work elsewhere if other children will still take care of them. The financial and physical capacity of elderly parents is a key factor in the pattern of informal support exchanges.

The geographic distance between parents and their children is also a fundamental determinant of any interaction between them, deciding not only the type of interaction but also the frequency of interaction. The need of support has been closely related with a decrease in mobility (Worobey and Angle, 1990; Speare et al., 1991). The more reduced the mobility is, the less independence can be expected from the elderly and the greater the resulting need for support, particularly in a cohabitational situation. Children living in metropolitan cities give more money to parents, a fact which may indicate some physical difficulty in providing parent care by children who live separately from parents located in rural areas (Pezzin et al, 2006).

Intergenerational exchange affects the well being of elderly parents as it reduces both stress and the burden and enhances the elder persons' life satisfaction (Ingersoll-Dayton et al, 1996). Dwyer and Miller (1990) examine the association among different characteristics of the caregiving network, the stresses and burdens on

primary care providers, and the area of residence. They found that when the frail older person is able to reciprocate by doing chores, baby sitting (child care), or providing some other type of assistance for the primary caregiver, both stress and burden are reduced in all these residential categories. (rural, small city and urban). This outcome corresponds to Ingersoll-Dayton et al's study (1996) exploring the role of intergenerational exchange relationships in the life satisfaction rating of a cross-national sample of older people. The main result is that the capacity to be an active provider in exchange relations enhances the elder's life satisfaction rating. Being mainly a recipient of help from adult children is related to a lower level of life satisfaction. The study also underscores the importance of the emotional component in intergenerational family relations to the well-being of the older population. It correspond with Kim and Kim's research (2003) examining relationships between the patterns of support exchange across generations and the subjective well-being of the Korean elderly as measured by the overall life satisfaction index. The findings suggest that the elderly, as well as the younger generations, put more value on a two-way, reciprocal intergenerational relationship base of mutual care and assistance, rather than simply following the traditional norm of filial piety.

Increasing the care providers' awareness of the reciprocal nature of their relationship with all family members may be an effective strategy in helping them appreciate their contribution to the well-being of their parents, and help achieve satisfaction in their caregiving role.

2.1.4 The Altruism Model

According to the altruism model, behavior within a family is based on the maximization of an individual's utility, which requires exchange with family members (Becker, 1974). The model can be extended to assume that it is family utility that is maximized, and it can be accomplished by an altruistic individual who heads the household, controls resources and cares about his/her own and the family's welfare (Lee, Parish and Willis, 1994) Altruism drives the family to play as a 'corporate unit', with resources combined and distributed efficiently to guarantee the survival of the head and each family member. The model predicts that a younger generation would provide more support to the older generation within social systems

that maintain strong family traditions and altruistic feelings for each other. The model also suggests that family members who are the most in need of support (often the oldest members) will receive the biggest volume of support, even if they have little to offer in return (Zimmer and Kwong, 2003: 25).

An altruistic disposition of family members toward each other would explain many aspects of family behavior, such as the efficient allocation of family resources by an altruistic member (Becker 1974). However, it is hard to empirically distinguish between a transfer that arises because of altruism and a transfer that reflects a more proper, efficient and orderly agreement amongst family members (Lillard and Willis, 1997: 117). But altruism is one reason for the exchange of support between adult children and their families (Lye, 1996: 81). However, intergenerational exchange theory explained that transfers would still occur without altruism because children are more likely to care for their parents when their parents have assets to bequeath in exchange (Kohara and Ohtake, 2005). Moreover, family members exchange resources (including companionship and affection) because they derive utility both from giving and receiving those resources (Becker, 1981). Children provide more care for their parents when they receive benefits from them.

This research study utilizes all four theories in examining the patterns of parent caregiving because each theory offers a different perspective and point of view. Intergenerational wealth flow theory illustrates intergenerational wealth transfer and the two directions of wealth flow: downward and upward wealth flow. On the other hand, the Power and Bargaining model explains the flow of wealth derived from power in controlling the family's resources. Intergenerational exchange theory and the Altruism model describe the underlying motivation which originates or generates intergenerational wealth transfer. The difference in the theories will complement each other and explain the study of parent caregiving. Therefore, this research will employ the theories as guidelines to analyze the pattern and determinants of caregiving.

2.2 Important Concepts Related to Parental Caregiving

The term “informal caregiving” has been defined in a variety of ways, some definitions containing some similarities and differences in detail. Generally, though, the term “informal care” gives meaning to the unpaid care provision to kinship-related people aged from 50 years up, who might be sick or chronically ill or not - but still need a provider of care (Horton et al., 2001). It also applies to the elderly who are loved and for whom the younger family members have a certain attachment (Barber, 2004) or those who have difficulties in conducting their daily lives due to physical, cognitive or emotional impairment. Time allocated to caregiving might be periodical or all of a 24 hour day, depending on different conditions. There is a variety of caregiving according to the older person’s physical ability, economic status, the housing environment and circumstances, as well as the probable assistance from outside.

In brief, informal caregiver means the person taking care of health-impaired people without financial recompense, as well as the caregiver and the recipient often being members of the same family or at least very closely related persons.

These persons can be so-called primary or secondary caregivers, full time or part time, and can live with the person being cared for or live separately. Results of many studies show that most of the elderly receive care from their families, relatives and friends, with adult children always being primary caregivers (Shanas, 1979y; Cantor, 1983; Matthews and Rosner 1988). Furthermore, it is mostly a single individual who carries most of the burden of caregiving responsibilities and the primary caregiver tends to be the person with the fewest competing obligations (family or work). Apart from the primary caregiver there is the secondary caregiver, the term referring to the person or persons sharing the care responsibilities with the primary caregiver. The secondary care provider may be an individual or a group. When the primary caregiver is a spouse, adult children are most likely to serve as secondary caregivers. When the primary caregiver is a child, secondary care providers tend to be spouses or siblings of the primary caregiver.

In reality most of the caregivers are members of families who also link and connect the families’ elders with state service systems for assistance and support in

emergency cases. Members of families also provide periodic and emergency care, provide accommodation and emotional warmth and support. Furthermore, caregivers are usually related to the recipients, for example, being spouses, children, brothers or sisters, grand-children, relatives or other members of the families who understand and are accustomed to the demands of the recipient(s).

Adult Children are the primary caregivers for their parents (Neuharth and Stern, 2000). Those close to their retirement age, whose parents are still alive, spend at least 100 hours per year on taking care of their parents in regard to daily living practicalities (Johnson and LoSasso, 2000).

There are many factors determining who is made responsible for a family's elders' caregiving. The choice or selection of the persons who are to be primary or secondary caregivers depends on the relationships within the families, as well as gender, living arrangements of the families (Cantor, 1979; Merrill, 1997), position within the sibling network, social class, ethnicity, sequence of caregiving, other members of the families including friends (Freudenburg, 1997). The sequence of relationships in the family is another factor determining the caregiving responsibility, starting with spouses, children, relatives, grand-children, sons-in-law or daughters-in-law (Moen and Dentinger, 2000). While Merrill (1997) found that 1/3 of the caregivers have no choice but to take on this responsibility because nobody else is willing to take on the task; 1/5 of the caregivers are selected by other members of the families or chosen by the parents. Only 14 % of them are voluntarily willing to take on this task. Culture is another important factor in determining which members of the families are to be the caregivers (Montgomery and Kosloski, 2001). For example, among the colored and the Hispanic Americans, it was found that the adult children are often primary caregivers, totaling about 75 %. The daughters of the elderly persons within this specific population group take care of their parents regarding housework and personal care to a larger extent than the white Caucasian Americans (Nerenberg, 2002).

The recipients are persons over the age of 65 years, usually called frail elders, who need assistance. These elderly people usually perform at least one of their daily practical activities such as taking a bath, going to the toilet, eating meals, getting dressed, or doing instrumental activities such as food preparation, shopping and

travelling to places with difficulties. This group accounts for about 20-30 percent of this population group (Smith, 2005).

Generally, caregiving is divided into 2 categories: daily activities, or Activities of Daily Living (ADLs), meaning every function and activity that people usually do without any help. This type of caregiving revolving around personal routine activities such as dressing, bathing, eating, and toileting. Instrumental Activities of Daily living (IADLs) means general care such as food preparation, accompanying a person to do the shopping, visiting a doctor, taking care of financial affairs and medical care.

2.3 The Sandwich Generation

The sandwich generation phenomena arises recently due to the longer life expectancy of the population: married couples having children later than previous generations. Members of households therefore today consist of grand-parents and grand-children, with the parents in the middle, so that the middle-aged adults have responsibilities to look after both their children and their elderly parents (Price, 2003). Inversely, many researchers argue that the sandwich generation is a gerontological myth because in the past the caregiving for children and the elderly is an event occurring sequentially rather than simultaneously (Spitze and Logan, 1990; Ward and Spitze, 1992). Families with sandwich generation are an exception rather than the norm for families in general (Loomis and Booth, 1995). However, these different interpretations still have not been conclusively determined in a theoretical framework.

Scholars have defined the term 'sandwich generation' in different ways and along varying criteria. Some definitions are loosely worded while others have specific meanings, for example sandwich generation meaning a middle-aged population segment which takes care of the parents in their later life stages and which also has to raise their own children at the same time. Hammer and Neal (2002) added the characteristic that the sandwich generation has to work alongside their caregiving contribution as well. Besides, Horton et al., (2001) specified that some of them may take care of their spouses or elderly relatives or even grand-children, thereby calling them "sandwich generation" because they are responsible for taking care of three generations or more of members of their families. The sandwich generation family

was divided into 2 categories: 1. A family consisting of a married couple and their elderly parents. The couple has to provide financial support for their children's education and other expenses, even if their children do not live with them. 2. A family consisting of a married couple which has the couple's children and parents living together in the same household (Kohli and Kunemund, 2004). However, if the leader of the family is an elderly member - such as a grand-father or a grand-mother - this type of family is not classified as part of the sandwich generation.

As most of the adult children who are in charge as caregivers for the elderly within the family, are generally women who play many complex roles - such as wives, mothers, daughters, care givers, and employees - some researchers have come to use the term 'sandwich generation' in a similar meaning to the term 'women in the middle', or 'being caught in the middle', which is used generally with regard to middle-aged people's tasks. Women, in particular, are more expected than men to take charge of caregiving duties so that they have to bear the bulk of responsibility for their work and taking care of their elderly parents, as well as their own children (Dautzenberg et al., 1998; Kohli and Kunemund, 2004). From information compiled by the National Alliance for Caregiving and American Association of Retired Persons (NAC/AARP) in a 1997 study, it was found that 41 % of all care providers to persons 50 years and older have themselves got children under 18 years of age, living in the same household. Similarly, Neal et al. (1993) studied 9,573 employees from 33 companies, finding that 42 % of them have to look after both the elderly as well as children. About 20 – 40 % of care givers are part of a population segment called sandwich generation. 44 % of Americans aged between 45 – 55 years have their own or their spouses' elderly parents to take care of, as well as their children aged 21 or below, with everyone living together in the same household. Furthermore, about 25 – 40 % of women of that age range have to take care of both their parents and their own children, and half of the women of this group work outside (Family caregivers Online, 2005).

2.4 Factors Influencing Caregiving to Elderly Parents

2.4.1 Gender

In a social context caregiving tasks are related to the gender role in society. The normative expectation of caregiving performed by males and females is different (Yee and Schulz, 2000). Sons were more often influenced by norms about filial obligation and inheritance expectations, while daughters were influenced by intimacy and altruism (Parrot and Bengtson, 1999).

Generally, caregiving duties usually fall on females, mainly spouses and daughters. More than half of all women have to look after sick or disabled people (Robinson et al., 1995). Traditionally, the females - whether spouses, daughters, daughters-in-law or granddaughters - are caregivers for the elderly in families in just about every society (Velkoff and Lawson, 1998). Females bear this task more than males do, especially for personal care (Horowitz, 1985b). Society imposes the importance of the caregiving role on females rather than on males, and even though the females are increasingly entering the labor market, their caregiving duties have not decreased accordingly (Harris, 1998).

From studies in the past, the sons' role in caregiving has been found to be only of secondary relevance. Gender role determination is an obstacle for sons to participate in looking after their parents. In China, for example, caregiving to the elderly is essentially related to gender differences: females are usually unemployed and are care providers to a much larger extent than men. Chinese culture and values are a substantial factor in determining patterns of caregiving (Zhan, 2003).

The trend of sons being primary caregivers is increasing as social changes and demographics - such as the increasing number of the elderly in the population and the smaller size of families result in a decreasing number of siblings available to look after their parents as well as the siblings' migration - take effect. These changes in the gender role oblige the sons to perform more of the duties than previously. In families without daughters, the sons have to take on the primary caregiving role (Horowitz, 1985b). However, there are studies showing that the sons often assign their wives instead to do this task (Narenberg, 2002). Husbands and sons increasingly begin to take on the role of primary caregivers as well as perform more various caregiving activities, such as, for example, personal care (Kaye and Applegate, 1990). Males are

obliged to participate in such duties because females increasingly enter the labor market which in turn reduces the number of usually available - female - caregivers. When comparing time management allocated for caregiving between male and female input, males tend to reduce the number of hours dedicated to caregiving due to other responsibilities such as family, work, and childcare, which is in contrast to females who can manage to carry on providing care performing and others tasks at the same time without necessarily decreasing the time allocation to caregiving to the elderly (Keating et al., 1999).

There are studies explaining different perceptions of the two genders regarding the caregiving process. Males regard caregiving duties as a new job or as post retirement activities (Kaye and Applegate, 1990). Females regard such responsibilities as undesirable and as a burden. As a result, males retain their sentimental status in carrying on the task better than the females. Furthermore, the approaches to problem resolutions and finding assistance are also different. Females usually use an emotion-focused resolution which relates to a higher tension level than that of males (Stoller, 1990). Also, older male caregivers receive more assistance- be it formal or informal - than their female counterparts. Such differences result in the varying degrees of task burden taken on by males and females and a subsequent burden confrontation.

Males and females define caregiving differently. Those women in particular who are wives, would see certain duties such as food preparation, laundry or home cleaning not as caregiving duties because they are part of regular housework they have to do anyway. But for the males, traditionally, housework is not their duty. So when they are obliged to perform housework, they think that they are actually providing caregiving duties (Keating et al., 1999). The son usually takes part in those duties concerning male work such as house repairs and work that does not need much time (Stoller, 1990). Besides, Delgado and Tennstedt (1997), researching the Puerto Rican sons' care provision to their parents, have found that the sons usually give financial help and assist in travel to different places, whilst daughters look after personal care. Nonetheless it was found that the sons help look after the houses and take their elderly parents shopping, both of which are essentially the daughters' duties. But, when considering the overall picture of care provision, both daughters and sons contribute equally towards parent care. Research for Japan, Long and Harris

(2000) states that Japanese men take over the task of caregiving for the elderly in the family at a rate of about 15 %. In fact caregiving is generally regarded as the wives' or daughters-in-law's duty but economic and social changes as well as demographic tendencies make the males take over the burden which used to be classified as exclusively female. It was also found that relationships within the family, confidence in government services, and patterns of activities in caregiving are more important for the elder care than gender differences.

Many studies found relationships between the gender of care providers and the gender of care recipients and characteristics of caregiving. Caregiver and care recipient, who are of the same gender, will give care and receive care to a larger extent than is the case with "cross gender" care provision. Sons give more assistance to their fathers than daughters do. Sons help their fathers in personal care more than daughters do, and daughters help their mothers more than sons in the area of personal care (Lee et al., 1994). Besides, the gender of caregivers relates to the attitude adopted toward caregiving tasks. Women feel that taking care of their mothers or their mothers-in-law is a heavier task compared to that of taking care of their fathers or their fathers-in-law. In contrast, sons think that looking after their own parents is a heavier task than looking after their parents-in-law (Lott, 1990/1991 quoted in Ingersoll-Dayton, 1996). Therefore it can be concluded that, for daughters, their feeling towards caregiving tasks is influenced by and through their parent gender role (whether their own parents or their husbands' parents), while for sons the relationship condition influences more the feeling about the caregiving task. Besides being the main primary care giver, women are not only which is up to 72.5 %, but most of the recipients are women as well because women tend to live longer life than men. Based on data compiled by the Family Caregivers Online, (2005), it was found that the demographic group increasing the fastest is the female population over than 85 years old (Moen and Dentinger, 2000). Consequently, it defines a caregiving pattern where women primarily take care of women.

The gender of the support providing children is also relevant and interesting. Studies about component patterns of sibling networks - such as being the only children, single-gender network and mixed-gender network - to find out the relationships between gender role and patterns of parent caregiving have found that

daughters tend to take care of ailing parents more than sons. Sons or daughters of a single child family spend the same amount of time taking care of the parents and have similar levels of pressures and responsibilities. In contrast, daughters from families with siblings of both genders have - to a larger degree than sons - tensions, burdens and demands on time resources for taking care of the parents. The studies help to understand the complexity of gender relations and patterns of parent care (Coward and Dwyer, 1990). Patterns and expectations of siblings as to parent caregiving duties usually depend on gender role traditions (Brintnall – Peterson, 2004). Sisters are usually in routine or backup groups, while the brothers take part in parent care in sporadic or limited patterns, based on each gender's knowledge or expertise, with males, for example, specializing in house repairs or financial management. However, in families where there are only sons, the sons normally show their willingness to coordinate other male siblings in caregiving in response to their parents' needs and requirements. Sometimes, they can manage to perform personal care which is more appropriate for women to provide. If members of families become and are aware of such issues, it will help the allocation of duties to be done on a more equitable basis.

2.4.2 Marital Status

The changing marital patterns of females also have an influence on patterns of parent care. Brody et al., (1995) studied and observed five groups of parent care situations involving females: a care providing daughter who was either married, has remarried, was separated/divorced, widowed or never married. They reported that parents of all groups received similar total levels of care from all sources combined, with daughters providing at least half of the care themselves. However, daughters who had never married, followed by the widowed, provided the largest proportion of the total volume of care services than the females in the other three groups. Married daughters had the most informal helpers, and never married ones were more often their parents' only informal helpers. Separated or divorced women who shared households had the highest proportion of paid care.

Is there any support from husbands in helping the women's parent caregiving burden? In Korea, for example, married women who received more socio-economic support and income from their husbands, experienced less depression than those who

did not have their husband's support (Son et al., 2003). In the Netherlands, research evidence shows that the role of husbands' support is not related to the depression of his wife resulting from her parent caregiving (Dautzenberg et al., 1999). Essentially an increase or decrease in the level of depression is not related to the husband's support or the caregiver's marital status (Spitze, and Logan, 1994).

Unmarried children are the preferred choice of elderly parents when it comes to a situation of cohabitation. Brody et al., (1995) found that when elderly parents need help to perform functions in their daily lives, 44% of them coreside with daughters who are not married (being divorced, widowed, or never married). The study confirms research done by Coward and Cutler (1991) which found that unmarried children are more likely to share a household with parents than those who are married. Coward (1991) found that 23.8% of married daughters who are care providers, shared households with their parents, compared with 57.4% of daughters who were unmarried. This outcome was similar to data for Cambodia, where a predominance of elders living with never married children of either sex – with a slight preference for daughters - was found (Zimmer and Kim, 2001).

These results were in sharp contrast to research outcomes in Thailand, Japan and the Philippines which found that elderly parents prefer to live with married children. In Thailand, on average, more than half of Thai families comprise members spanning three generations, with almost no statistical difference having been found between urban and the rural families. Nearly all elders living with adult children live with the eldest - adult - child, and live with a married child more than with a single child, (Knodel and Napaporn Chayovan, 1997). Elderly Japanese prefer to live with married children and often the oldest son and thus also receiving care from their daughter-in-law. Besides, living with married children was the most stable situation and the elderly parents living with unmarried children made a transition to another arrangement (Brown et al., 2002).

Not only is the marital status of adult children a significant factor for co-residence between parents and adult children, but also the marital status of the parents themselves. The widowhood of parents plays a significant role in influencing levels of vulnerability and the receipt of support during old age. For example, the marital status of elderly parents is related to their living arrangements. Widowed older people are

much more likely to live with an adult child than those who are married, particularly in advanced old age when disability precludes independent living. In the Philippines, even though most of the elderly Filipinos live with their children, the percentage of those living with married sons is increasing, especially in urban areas. 28.6% live with unmarried sons and 21.7 % live with unmarried daughters (Natividad and Cruz, 1997).

2.4.3 Income

The income of adult children is related to providing parent support. Amongst the adult siblings those with higher incomes are less likely to give time-intensive care to their parents than siblings who have a lower income. But they provide financial support to parents in a compensatory way to bridge the support gap. It is a trade-off between time allocated to work and that allocated to parent care provision. American families who have to take care of their elderly parents usually have lower incomes than families who are not responsible for parent care. Low-income females tend to spend twice as much time to look after the families' sick members than their high-income counterparts, with more than half of them having to pay for medical care as well (Mack and Thompson, 2005). One third of housewives with husbands to take care of are normally categorized as "poor" or "near poor". As parent caregiving is a long term care undertaking, the adult children who take care of the parents are likely to give more financial support than the adult children who do not participate in the practical care provision. The care burden decreases their income.

2.4.4 Number of Children in the Adult Children's Family

The number of children in the adult children's family has an impact on the mutual relationships between their elderly parents and the adult children. The number of children aged below 18 years has an impact on the families' caregiving and the support to the elderly parents of adult children or vice versa. In addition, the adult children with children younger than 5 years old normally give significantly less assistance to their elderly parents. Evolutionary theory predicts that parents will provide more support to adult children who have children (Eggebeen and Hogan, 1990). The number of the adult children's children has a significantly positive

relationship to assistance as well as to patterns of assistance from elderly parents to adult children, for example, elderly parents with their young grand-children usually help adult children more than those without grand-children but has no relation to the assistances from adult children to their elderly parents (Eggebeen, 1992; Spitze and Logan, 1992: 305).

If comparing the family- size preference in Thailand between present and the past, then nowadays couples prefer fewer children than before because socio-economic change has caused the expense of raising a child to increase, especially education expenses. However, the burden of child-rearing does not decrease the pursuit of a certain family-size preference. Thus, it is interesting to further examine if a smaller number of children born to adult children still has any impact on elderly parent caregiving and intergenerational exchange, or not.

2.4.5 Intergenerational Co-Residence

Intergenerational co-residence or cohabitation is a general phenomenon in under-developed or developing countries because the more socioeconomic developed a society is, the lower the quantitative levels co-residence between adult children and their elderly parents are. Living in the same household is one way to help the elderly (Westley, 1998), and it is an important pattern of informal support for them. The outcome of any co-residential arrangement between elderly parents and adult children creates a benefit for both: elderly parents receive social support, finance and health care, which they need from their children. The reciprocal support will occur when elderly parents help to look after grand children or perform daily household chores.

Even though care provision is not necessarily a prime motivating factor for cohabitation, parents and healthy-wealthy children living together does constitute a pattern guaranteeing that the parents will be assisted when the need arises in the future. Living arrangement is the most important factor for the daughters' care for the elderly mother (Lang and Brody, 1983: 198). But Keasberry (2002), who conducted a study about the care and security for the elderly, including social changes in rural societies in Indonesia, found that living together or living close by is not a guarantee that the elderly are guaranteed to be being taken care of. In Russia, three-quarters of

pensioners have adult children and grand children living together with them or in the same area (Golubeva and Danilova, 2006).

Overall, older people living with their children still represent a high proportion within the population, despite the number of elderly living alone or living with their spouses being on the decrease (Chan, 2005).

In Japan, those elderly not living alone or staying in old age retirement homes, usually continue to live with their families. A large number of Japanese elderly live with their children, either in the old people's own homes or in the adult children's households. The proportion of the elderly over 65 years old living with their children is 48.8 %. But the adult children who live separately make up about 30 % (Kohara and Ohtake, 2005). Normally, after marriage, Japanese women have to live with their husbands' families but at present the married couples often live separately from their parents, or - in case of necessity - most of the couples generally live with the husbands' family. There is a tendency, though, for the proportion of couples living with the wives' parents actually rising, increasing from 9.9 % in 1980 to 14.4 % in 1996 (Mizuno-Shimatani, 2003).

Even though co-resident between elderly parents and adult children is an important factor for the care provision to the elderly parents in both developing countries and developed countries, co-resident does depend on certain factors which cause both obstacles and opportunities and which are described as follows:

In many developing countries there is a strong tradition of filial piety which is often expressed in the co-residency of older people and their adult children. Many countries in Asia, such as the Philippines, Thailand, and Taiwan, regard the cohabitation between the parents and children as a social norm. For the developing countries, the traditional influence of the element of gratitude makes the elderly live with their adult children in order to receive care from family members. However, surveys in many developed countries have shown that the families' role in this regard has decreased (Velkoff and Lawson, 1998). This is due, at least in some Asian countries, to the economic progress that resulted in a decrease in the proportion of families with intergenerational cohabitation (Chan, 2005) which in turn negatively affects the elders' well-being (Martin, 1990). Japanese society still maintains its

traditional culture, values, and customs regarding caregiving for the elderly, with - for example - members of the families having to take care of their elderly parents.

The geographic proximity between elderly parents and adult children is the most important factor which determines the parent-child relationships, including the exchange of support to each other. Furthermore, the amount and types of assistance given to parents by the adult children are determined by the various patterns of living conditions. When comparing parents living far from their children with those living close to them, it was found that those parents living far away from their adult children receive less material assistance (Aldous and Klein, 1991), and are also visited less by their children (Bengtson and Robert, 1991). Normally the parents do not consider those adult children living far away as ones from whom they could confidently ask for help (Connisdis and Davies, 1990).

The research of Ha and Carr (2005) studied the impact of the distance between the adult children's and widowed parent' dwellings in relation to the parents' psychological adjustment and social integration, using a comparative study between parents living further than a one hour drive from their children with those living together or living apart at a distance of less than an hour's drive. After having controlled the variables of the parent-child relationships, it was found that the parents living with their children - or where the visits between each other can be done within one hour - have less tension than those parents living far from their children.

When adult children live separately from elderly parents, it may cause difficulties in caregiving, for example taking the parents to see a doctor for regular appointments, repairs to the parental home, and performing unsafe housework for the elderly. The parents' deterioration in health to a point where they cannot perform activities as previously obliges the adult children and the parents to live together. It is easier for the parents to move to live with their children. Those elderly parents with health problems, in particular, usually move to live with the adult children to facilitate the provision of care. However, the tension and stress resulting from various tasks of looking after their own families as well as taking care of the parents, tends to increase after the parent move to live with them because the families are forced to adjust their daily mode of living.

The economic status of elderly parents is also an important factor when making decisions who they should co-reside with. Moreover, owning a home reduces the odds of an elderly person moving closer to, or in, with their children (Brown et al., 2002). Poor elderly parents almost have no choices, for example, a study by the United Nations conducted in 1999 found that the elderly in Thailand want to live with their children at a high rate of 80 %, with the elderly females living in urban areas in particular wanting to live with or near their children (United Nations, 1999 quoted in Chan, 2005). The reason was that the elderly females of this generation normally have a low level of education, are unhealthy, and in the past had less opportunity to work than the males. Also, the uneasiness of urban life together with a high cost of living consequently makes them want to live with, or close to, their children.

But due to economic growth, elderly people have a much better financial status than previously. Also, social insurance provides them with more opportunities to choose their living arrangements. Thus, both institutional and non-institutional residence arrangements of the elderly are related to their economic status in later life. Living separately from one's children is regarded as "superior goods" in developed countries. Elderly who need privacy or life's freedoms and have a good financial status, make the decision to enter nursing homes although the cost is very high but they need excellent and professional care. When the elderly have to change their living arrangements, they have to consider short term and long term issues as to their income, for example savings or other assets, including trends in income changes, for example, elderly women whose income is reduced for whatever reason, may rethink or re-evaluate their options of living or co-residing with their family.

There are many factors causing the decrease in the number of families with intergenerational membership such as the downturn in population growth. Analysts suggest that the opportunity of living alone diminishes with having at least one child which is to be the parent care provider in the future. Gender preference of the child the parents prefer to live with is another important factor. A study by Schmertmann et al., (1990) about the cohabitation between elderly parents and adult children in the United States on the basis of 1990 census data, found that younger elderly live with their sons more than with the daughters, while the older elderly live with their daughters rather than with their sons. Widowed elderly live with their sons and

daughters at nearly the same rate or proportion, while widows aged 80 and over live with their daughters more than with their sons. Moreover, migration and changing attitudes to living with the adult children make the child-parent cohabitation pattern tend to decrease (Da Vanzo and Chan, 1994). Furthermore, according to a survey from Taiwan, it was found that the adult children's increase of financial assistance reduces the proportion of adult children co-residing with their elderly parents (Westley, 1998). The more income the adult children and elderly parents have, the less the likelihood of parents and children living together (Velkoff and Lawson, 1998). Besides, in India, most research on the impact of modernization on aging is based on the general concept that modernization processes such as urbanization, industrialization, and women's participation in extra-family work will erode traditional family support systems for older persons and - as a consequence - leave them vulnerable and isolated (Sudha et al., 2004).

Elderly parents living with their adult children may cause tension and stress within families. Adult children often face the conflicts when looking after their parents. Even when the care givers regard their parents as a means of financial support and consider the protective element of family life, the adult children's "keepers of the family history", the elders are nonetheless considered a burden for the families when they require increasing care in their daily life activities. When taking care of elderly parents, the adult children's time allocation for their own families and personal activities decreases. The parent care providers are more stressed and less satisfied with work than their fellow workers, leading to the loss of career progression opportunities.

2.4.6 Parent Health

Parent health is an important factor and determinant as to the requirements of care and also, as a consequence, the needed living arrangements, especially with regard to intergenerational cohabitation. Parent health is a common predicting factor for parent caregiving both in urban and rural areas (Jiraporn Khiewyoo, 1995). Elderly who are healthy may live alone, whereas those with health impairments require care from their family members. In 1997, Mickus, Stommel and Given found that, in general, the level of care requirement either for activities of daily living

(ADL) and instrumental activities of daily living (IADL) are important predictors bringing elderly parents and adult children to eventually live together. Furthermore, poor health of elderly parents triggers a change in living arrangements. Physical (i.e., chronic conditions and functional status) and mental (i.e., depression) health conditions exerted both direct and indirect effects on transitions in living arrangements (Brown et al., 2002). Parent health is also an important factor in the adult children's care provision and financial assistance. Adult children will provide more assistance to health-impaired parents than to those in healthy condition (Kobayashi, 2000).

2.5 Elderly Parent Caregiving among Siblings

Research in the past usually examined only those adult children who were the primary caregivers and neglected the other children who were secondary caregiver (Johnson and Catalano, 1981; Cantor, 1983; Stoller and Earl, 1983; Horowitz, 1985b). The studies of parent caregiving involving all sibling children has only been recognized recently because caregiving for the elderly is a long-term activity and impacts on the entire family system. Therefore the responsibilities should be divided amongst all siblings, depending, however, on individual siblings and of course the parents themselves as well. (Neuharth and Stern, 2000; Checkovich and Stern, 2002).

As to parent caregiving there is a general initial expectation from the outset as to who will function as the primary caregiver. Generally, only one child in a family provides help with activities of daily living (ADLs) or instrumental activities of daily living (IADLs). As to financial or material support the responsibility is likely to be shared amongst siblings (Lin et al., 2003). If family members co-operate in the parent caregiving responsibilities, it does not only make them feel close but also makes the primary caregivers feel that they are not abandoned or carrying the burden alone. They will be spiritually reinforced and supported to continue with their task of care provision. The co-operation of members of the family when taking care of their parents is positively useful to the family as a whole. Studies have found that co-operation between members of the families and specialists in taking care of a family's elderly members who are physically or mentally impaired, not only helps to improve

the recovery of the patients, but also helps to improve the well being of all members of the family.

The main problem is the attempt to determine who is to be the decision-maker, and how the responsibilities for expenses and caregiving tasks are shared and distributed equally. Conflicts within the families often occur when the elderly parents want their children to support their increasing needs according to their - deteriorating - health condition. Hence members of the families must co-operate in finding methods or targets in looking after their parents (Fetsch et al., 1999). Good relationships between siblings enable their co-operation in taking care of the parents and, on the other hand, parent caregiving, in turn, is also important for their relationships. Delivery of care provision tasks must be completed in an equitable framework; otherwise they may cause conflicts between siblings (Ingersoll-Dayton et al., 2003). Conflict often occurs amongst female siblings as they are the gender primarily determined to be the primary parent caregivers (Hare, 1995). Moreover, it was found that there is a high rate of inequality in parent caregiving - to the tune of 73 % which originates from various factors, such as wealthy children often living separately from their parents (Lloyd-Sherlock, 2000), children living with - or closest to - the parents usually being or becoming the primary care givers and children with high education levels and good employment tending to help take care of the parents to a lesser extent than other children (Johnson et al., 2004). Adult children can choose to buy formal, institutional care services if they do not want to take care of the parents themselves. Adult offspring, whose time input is higher than the cost of formal care, tend to buy such care services, whilst those adult children with lower time input costs tend to look after the parents themselves (Ettner, 1996). The inequality of parent caregiving has an impact on relationships within the family and on the primary care givers' children.

Expectation among children regarding parent caregiving usually depends on the gender's traditional role. If a situation of inequity occurs amongst children in regard to care provision duties, conflicts will arise. Normally, this inequality falls on and affects children closest to the parents and also originates from each of the adult children's occupational circumstances (Harris, 1998). Those adult children who have to take on more responsibilities are often frustrated and angry with other siblings assuming less responsibility (Strawbridge and Wallhagen, 1991), while the latter, on

the other hand, feel guilty for not helping to equally distribute and discharge the responsibilities. This actually causes dissatisfaction on both sides. Nevertheless, even if daughters are assigned to be primary care givers, the care is somehow distributed amongst several family members such as siblings, spouses, and children of the primary caregivers. The primary care providing child generally hopes to have the support of other sibling, and if such support is not forthcoming as might be expected, he or she feels being left to bear the responsibilities on their own.

2.6 Research Framework

In this study, theories, concepts and researches concerned with parent caregiving as well as factors expected as the determinants of parent caregiving were all reviewed. Subsequently a conceptual framework for the study was established as follows (Figure 1).

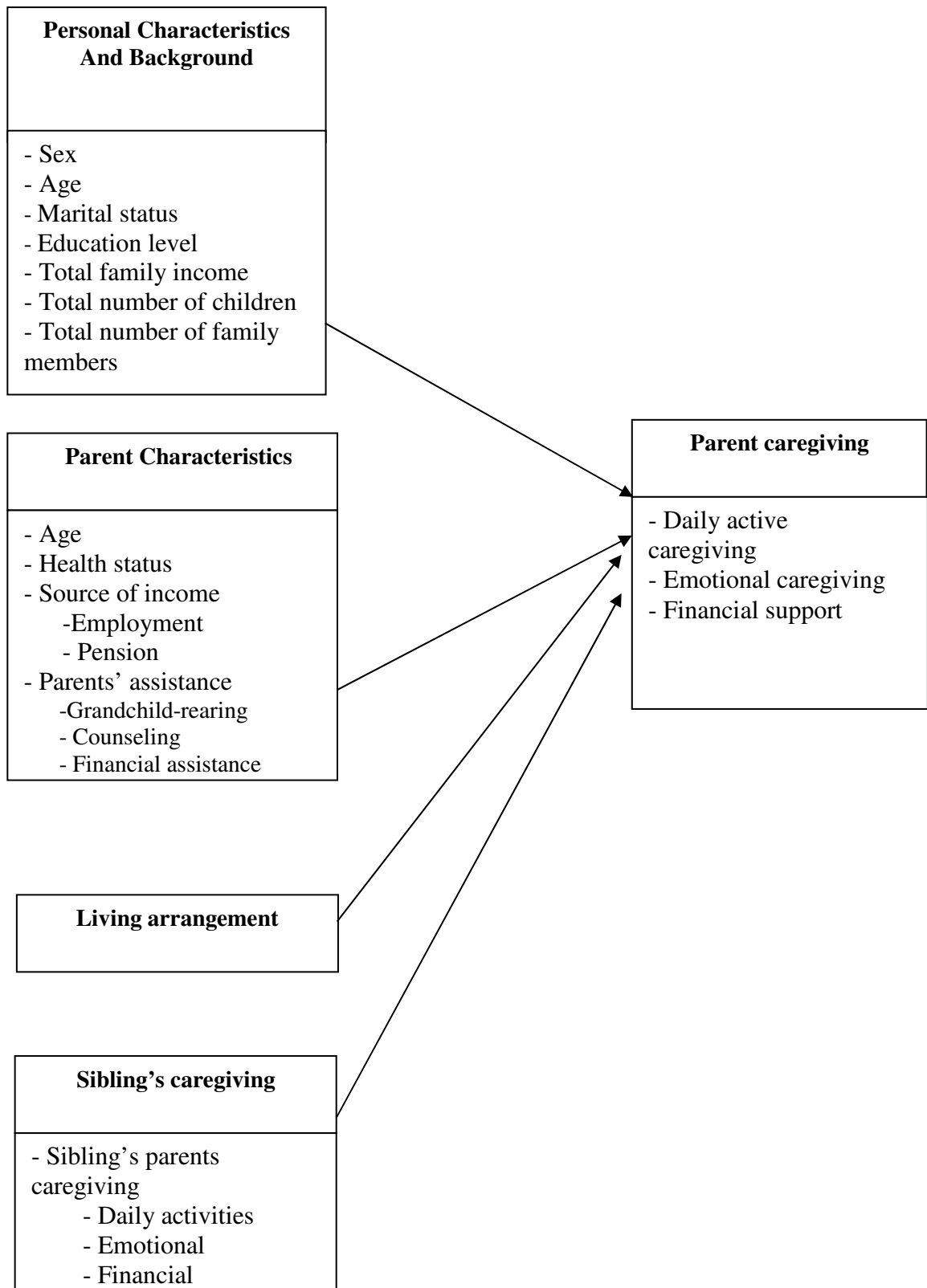


Figure 2.1 Conceptual Framework for the Study of Parental Caregiving of the Sandwich Generation

CHAPTER 3

RESEARCH METHODOLOGY

The research is using a cross-sectional survey to collect data. The procedure consists of defining population and selecting samples, data collection methods, instrument for collecting data, measurement of studied variables and data analysis. In addition, background characteristics of the respondents and parents are also included in the final section.

3.1 Population and Sample

Population

The target population used for the study is people aged 35-55 years and resident in the Bangkok Metropolitan area. The total number of this population is 2,152,135, comprising 990,146 males and 1,162,169 females (Office of the Permanent Secretary for Bangkok Metropolitan Administration, Administration and Registration Division, 2006)

Sample size

Yamane's formula is utilized to compute the sample size for this study. The calculation formula (Yamane, 1970: 580-581) is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Where n = sample size

N = population

e = level of precision = 0.05

$$\begin{aligned} n &= \frac{2,152,135}{1 + 2,152,135(0.05)^2} \\ &= 399.99 \end{aligned}$$

Therefore, a sample size of 400 is used in the study.

Sampling Methods

For sampling methods, a multi-stage stratified random sampling is used. The sampling procedures are:

Stage 1: Divide Bangkok into 6 strata, groups of districts. They are

Stratum 1: South Krungthon, consisting of Khlong san, Bang Khun Tien, Chom Thong, Bang Khae, Thung Khru, Bang Bon, Thon Buri, Rat Burana

Stratum 2: North Krungthon, consisting of Taling Chan, Bang Phlat, Thawi Watthana, Phasi Charoen, Bangkok Noi, Nong Khaem, Bangkok Yai

Stratum 3: Chao Phraya, consisting of Khlong Toie, Yan Nawa, Din Daeng, Vadhana, Bang Kho Laem, Sathorn, Bang Na, Huai Khwang, Phra Khanong

Stratum 4: Burapha, consisting of Don Mueang, Lat Phrao, Chatu Chak, Wang Thong Lang, Bang Kapi, Sai Mai, Bang Khen, Laksi, Bueng Kum

Stratum 5: Rattanakosin, consisting of Dusit, Phaya Thai, Bang Sue, Phra Nakhon, Bang Rak, Ratchathewi, Pathumwan, Samphanthawong, Pom Prap

Stratum 6: Srinakarin, consisting of Khlong Sam Wa, Lat Krabang, Khan Na Yao, Suan Luang, Phrawet, Saphan Sung, Min Buri, Nong Chok

Stage 2: In each stratum, select one district at random sampling. The results are shown in table 3.1

Table 3.1 District Group, Selected Districts, Selected Sub-Sample Districts

District Group	Selected District Sub-District	Selected
South Khungthon	Thung khru	Thung khru
North Khungthon	Bangkok Noi	Ban Chang
Chao phraya	Sathorn	Thung wat Don
Burapa	Chatuchak	Lat Yao
Rattanakosin	Dusit	Nakornchaisri Rd
Srinakarin	Prawet	Prawet

Stage 3: Allocate total sample size proportionally to each sampled sub-district derived from step 2. The results are shown in table 3.2

Table 3.2 Population and Sample Size Classified by the Selected Sub-District

Selected Sub-District	Population (Age 35-55)		Sample Size
Thung Khru	23,159	(18.7)	75
Ban Chang Lorh	14,571	(11.7)	47
Thung Wat Don	17,719	(14.3)	57
Lat Yao	19,601	(15.8)	63
Nakornchaisri Rd.	24,829	(20.0)	80
Prawet	24,165	(19.5)	78
Total	124,044	(100.0)	400

Source: Bangkok Metropolitan Administration statistics (2006).

Stage 4: Systematic sampling technique is employed to select households of such areas as follows:

- 1) One out of the main roads from selected sub district is randomly selected by simple random sampling. Six main roads are shown in table 3.3
- 2) Selected Soi which is odd numbered
- 3) Selected household systematically in the selected Soi from the district map.

In each selected household, the unit of analysis is the sample age 35-55 years who have resided in Bangkok Metropolitan for at least 1 year. The sample must look after at least one child whose age is under 18 years and his/her parents (father and/or mother) and still being alive at the time of the interview. The interviewers skipped gathering data from respondents who did not meet the above criteria.

Table 3.3 Selected Sub-District and Selected Main Road

Selected Sub-District	Selected Main Road
Thung Khru	Pracha-utit
Ban Chang Lorh	Isaraphap
Thung Wat Don	Chan
Lat Yao	Paholyotin
Nakornchaisri rd.	Nakornchaisri
Prawet	Srinakarin

3.2 Data Collection

The primary data used in this study is collected through a survey in which eligible respondents are interviewed by using a standardized questionnaire. Data is collected from March to June 2007. The interviews are conducted at the respondent's households. The interviewing process usually began with an introduction by the interviewer, outlining the objectives of the study, and requesting cooperation. Data is then collected by face- to-face interview. A total number of 400 respondents are interviewed.

3.2.1 Instrument for Collecting Data

A questionnaire for collecting data is designed and developed, beginning with a review of literature concerning related research. Subsequently a question form is prepared, with questions in the primary questionnaire being created and undergoing a pre-test by interviewing the sandwich generation, aged 35-55, living in Bangkok Metropolitan, asking them to supply the most accurate and correct information about their providing of parental care.

The questionnaire used in this research is a structured questionnaire (details in appendix A) which is divided into 6 parts as follows.

Part 1: Background characteristics of the respondents

This part included questions on sex, age, current marital status, education level, occupation, income, health status, number of siblings, number of children, number of family member and total family income.

Part 2: Parents' characteristics

This part covered questions on parents' characteristics such as age, education level, income source (such as from working, pension and/or from children) and health status. The response scale for parents health is Likert Scale, ranging from very healthy, healthy, rather healthy, moderate, less than moderate, rather fable and feeble. The scores given are in a logical order starting from 7 to 1 respectively.

Part 3: Living arrangements

This part included questions on if the respondents are living with their father or mother, and, if so, for how long and in what type of co-habitational circumstances: co-resident with parents in respondent's house or co-resident with parents in parents' house. For respondents who live separately from their parents, the questionnaire asked for how long they have lived separately from their (father and/or mother. Furthermore all respondents are asked about issues or problems in providing parent care and any conflicts amongst household members.

Part 4: Parents' assistance

This part included details of parents' assistance to respondents in 3 types: the rearing of grandchildren (child care), counseling and financial support. The response scale for each item is Likert Scale, ranging from most, almost, more than moderate, less than moderate, less and least. The scores given are in a logical order starting from 7 to 1 respectively. The levels of parental support of each type were arranged in order from the scale into 3 levels: below moderate, moderate and above moderate.

Part 5: Types of parent caregiving undertaken by the respondents

The questions on types of parent caregiving consist of 3 types of care provision:

- 1) Physical care, consisting of 3 items; personal care, meal provider, domestic work. The response scale for each item is Likert Scale, ranging from everyday, 4-5 times per week, 2-3 times per week, 1 time per week, 2-3 times per month and 1 time per month and never/rarely. The scores given are in a logical order starting from 7 to 1 respectively.

2) Emotional care, it is divided into 2 types: accompanied transportation and conversation with parents. Accompanied transportation consists of 5 items; taking parents on trips, doctor visits, to the temple, to meet friends, to go to shopping. The response scale for each item of accompanied transportation is Likert Scale, ranging from more than 1 time per month, 1 time per month, every 2-3 month, every 4-5 month, every 6-7 month, 1 times per year and rarely/never. The scores given are in a logical order starting from 7 to 1 respectively. Conversation with parents consists of 1 item. The response scale for the item of conversation with parents is Likert Scale, ranging from everyday, 4-5 times per week, 2-3 times per week, 1 time per week, 2-3 times per month, 1 time per month and never/rarely. The scores given are in a logical order starting from 7 to 1 respectively.

3) Financial support, including questions on frequency and amount of money that respondents contribute to parents' personal expenses, such as parents' medical expenses and sources of parents' medical expenses.

Part 6: Sibling support to parents

In this part, questions are separated for two groups of respondents.

First part: This part targeted respondents who have siblings. It covered questions on siblings who are in charge as primary caregiver to parents on a daily active basis, also providing emotional and financial support. It also focused on the financial status between respondents and their siblings.

Second part: This part is aimed at respondents who are a single child. It included questions on who is the primary care provider for their parents in daily active care giving, as well as emotional and financial care and support.

3.2.2 Validity and Reliability

Prior to collecting any data the validity and reliability of the questionnaire is assessed in order to provide a good quality instrument. The face validity of every subscale in the questionnaires used for this research is examined before using it in the pre-test process in order to establish that the questionnaires are valid to the accepted degree. The questionnaires are tested on 30 respondents who are characterized as a sandwich generation and live in Bangkok Metropolitan. The respondents answered the

questionnaire individually. The obtained data is subsequently analyzed to assess its reliability. The values of coefficient Cronbach's Alpha is shown as follows:

Physical caregiving is .831.

Emotional care is .761.

Parental support to sandwich generation is .905.

According to these results it is established that the instruments developed for this study could be considered reliable.

3.2.3 Measurement of Variables

Table 3.4 illustrates the variables in this study, with their measurement being explained and defined in order to easier comprehend the study:

Table 3.4 Variables, Definition and Measurement

Variables	Definition	Measurement
Dependent Variables		
Physical care	Physical caregiving to parents : toileting, bathing and dressing	Interval : score from 3 questions with response scal range 1-7
Emotional care	Emotional care of parents : accompanying on trips, visiting a doctor, meeting parents' friends, temple visits and shopping : conversation with parents	Interval : score from 5 questions with response scal range 1-7
Financial support	Money given to parents per month	Ratio
Independent Variables		
Age	Age at last birthday	Ratio

Table 3.4 (Continued)

Variables	Definition	Measurement
Sex	The gender of the sandwich generation	Nominal with 2 groups 1 = female 0 = male
Education	Years in school	Ratio
Marital status	Current marital status of the sandwich generation	Nominal 1= married 2= separated/divorced 3= widowed
Occupation	Occupation of sandwich generation	Nominal 1=Public sector employee 2=Private company employee 3=Owner business 4=Laborer
Total family income	Total family income per month	Ratio
Total number of children	The number of all living children (Number of persons)	Ratio
Number of living siblings	The number of living siblings of sandwich generation (Number of persons)	Ratio
Living arrangement	living separately from or with parents	Nominal 1= non-co-residence 0= co-residence

Table 3.4 (Continued)

Variables	Definition	Measurement
Sibling	Sibling of sandwich generation	Nominal 1= have sib(s) 0= single child
Parental health	Health status of sandwich generation's father and /or mother	Interval : score from 1 question with response scale range 1-7
Source of income	Source of parental income	Nominal 1=Working 2=Pension 3=Others
Siblings' assistance	Sibling in charge of parents' care given divided into 3 types; <ul style="list-style-type: none"> - Physical - Emotional - Financial 	Nominal 1= physical care 2= Emotional care 3= Financial support
Parents' assistance	Parents' assistance to sandwich generation, divided into 3 types; <ul style="list-style-type: none"> - Grandchild-rearing - Counseling - Financial support 	Interval : Scores from 9 questions with response scale range 1-7

3.2.4 Statistics Used for Data Analysis

The statistics used to describe characteristics of the sample are frequency distribution, percentage, mean (\bar{x}) and standard deviation (S.D.)

To investigate the determinants of parent care giving, independent variables consisted of 4 sets of variables

1) Demographic characteristics of respondents consist of 8 variables (a) gender (b) age (c) current marital status (d) education level (e) total family income (f) (g) total number of children (h) total number of family members

2) Parents' characteristics consist of 4 variables (a) age (b) health (c) source of parents' income (d) parents' assistance

3) Living arrangements of respondents consist of 2 variables (a) non-co-residence (b) co-residence.

4) Sibling's parental care provision consists of 4 variables (a) number of living siblings (b) daily activities of practical care (c) emotional caring (d) financial support

From the conceptual framework presented in chapter 2, the author used 3 different models expressed; the dependent variable of equation model 5.1-5.4 is physical care, the dependent variable of equation model 5.5-5.8 is emotional care, and the dependent variable of equation model 5.9 – 5.12 is financial support as follows.

Model of Analysis:

The hierarchical regression analysis is used to investigate the determinants of parent care giving. The equations are presented as follows;

1) Influence on the daily activities / practical care giving

$$\text{Model 1} = a + b_1 \text{SEX} + b_2 \text{AGE} + b_3 \text{MARI} + b_4 \text{EDU} + b_5 \text{T.} \\ \text{INC} + b_6 \text{N.CHILD} + b_7 \text{N.FAM}$$

$$\text{Model 2} = a + b_1 \text{SEX} + b_2 \text{AGE} + b_3 \text{MARI} + b_4 \text{EDU} + b_5 \text{T.} \\ \text{INC} + b_6 \text{N.CHILD} + b_7 \text{N.FAM} + b_8 (\text{P}) \text{AGE} + b_9 \\ (\text{P}) \text{HEALTH} + b_{10} (\text{P}) \text{G-CHILD} + b_{11} (\text{P}) \text{COUSEL} \\ + b_{12} (\text{P}) \text{FINCL}$$

$$\text{Model 3} = a + b_1 \text{SEX} + b_2 \text{AGE} + b_3 \text{MARI} + b_4 \text{EDU} + b_5 \\ \text{T.INC} + b_6 \text{N.CHILD} + b_7 \text{N.FAM} + b_8 (\text{P}) \text{AGE} + b_9 \\ (\text{P}) \text{HEALTH} + b_{10} (\text{P}) \text{G-CHILD} + b_{11} (\text{P}) \text{COUSEL} \\ + b_{12} (\text{P}) \text{FINCL} + b_{13} \text{N-CORES}$$

$$\begin{aligned} \text{Model 4} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T. INC} \\ & + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 \text{ (P) AGE} + b_9 \text{ (P)} \\ & \text{HEALTH} + b_{10} \text{ (P) G-CHILD} + b_{11} \text{ (P) COUSEL} + b_{12} \\ & \text{(P) FINCL} + b_{13} \text{ N-CORESD} + b_{14} \text{ NUMSIB} + b_{15} \\ & \text{(SIB) DAILY} \end{aligned}$$

2) Influence on the emotional care provision

$$\begin{aligned} \text{Model 1} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T.} \\ & \text{INC} + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} \end{aligned}$$

$$\begin{aligned} \text{Model 2} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \\ & \text{T.INC} + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 \text{ (P) AGE} + b_9 \\ & \text{(P) HEALTH} + b_{10} \text{ (P) G-CHILD} + b_{11} \text{ (P) COUSEL} \\ & + b_{12} \text{ (P) FINCL} \end{aligned}$$

$$\begin{aligned} \text{Model 3} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \\ & \text{T.INC} + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 \text{ (P) AGE} + b_9 \\ & \text{(P) HEALTH} + b_{10} \text{ (P) G-CHILD} + b_{11} \text{ (P) COUSEL} \\ & + b_{12} \text{ (P) FINCL} + b_{13} \text{ N-CORESD} \end{aligned}$$

$$\begin{aligned} \text{Model 4} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \\ & \text{T.INC} + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 \text{ (P) AGE} + b_9 \\ & \text{HEALTH} + b_{10} \text{ G-CHILD} + b_{11} \text{ COUSEL} + b_{12} \\ & \text{FINCL} + b_{13} \text{ N-CORESD} + b_{14} \text{ NUMSIB} + b_{15} \text{ (SIB)} \\ & \text{EMOTION} \end{aligned}$$

3) Influence on the financial support

$$\begin{aligned} \text{Model 1} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T. INC} + \\ & b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} \end{aligned}$$

$$\begin{aligned} \text{Model 2} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T.INC} + b_6 \\ & \text{N.CHILD} + b_7 \text{ N.FAM} + b_8 \text{ (P) AGE} + b_9 \text{ (P) HEALTH} + \end{aligned}$$

$$b_{10} (P) \text{ WORK} + b_{11} (P) \text{ PENSION} + b_{12} (P) \text{ G-CHILD} + b_{13} (P) \text{ COUSEL} + c_{14} (P) \text{ FINCL}$$

$$\begin{aligned} \text{Model 3} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T.INC} \\ & + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 (P) \text{ AGE} + b_9 (P) \\ & \text{HEALTH} + b_{10} (P) \text{ WORK} + b_{11} (P) \text{ PENSION} + b_{12} \\ & (P) \text{ G-CHILD} + b_{13} (P) \text{ COUSEL} + c_{14} (P) \text{ FINCL} + b_{15} \\ & \text{N-CORESD} \end{aligned}$$

$$\begin{aligned} \text{Model 4} = & a + b_1 \text{ SEX} + b_2 \text{ AGE} + b_3 \text{ MARI} + b_4 \text{ EDU} + b_5 \text{ T.INC} \\ & + b_6 \text{ N.CHILD} + b_7 \text{ N.FAM} + b_8 (P) \text{ AGE} + b_9 (P) \\ & \text{HEALTH} + b_{10} (P) \text{ WORK} + b_{11} (P) \text{ PENSION} + b_{12} \\ & (P) \text{ G-CHILD} + b_{13} (P) \text{ COUSEL} + c_{14} (P) \text{ FINCL} + b_{15} \\ & \text{N-CORESD} + b_{16} \text{ NUMSIB} + b_{17} (\text{SIB}) \text{ FINCL} \end{aligned}$$

4) Meaning of variables abbreviation

(1) Demographic variables

- SEX = male and female
- AGE = current age
- MARI = marital status
- EDU = highest educational achievement / level
- T.INC = total family income per month
- N.CHILD = the number of all children
- N.FAM = the number of family members

(2) Parents' variables

- AGE = current age
- HEALTH = health status of parents
- G-CHILD = parents' grand child - rearing
- COUSEL = parents' counseling
- FINCL = parents' financial support
- WORK = parents' income from working
- PENSION = parents' income from pension

(3) Living arrangement variables

N-CORESD = non-co-residence

(4) Sibling variables

NUMSIB = number of living siblings

(SIB) DAILY = parents daily activities of practical care giving from sibling

(SIB) EMOTION = parents emotional caregiving from sibling

(SIB) FINCL = parents financial support from sibling

3.3 Background Characteristics of the Respondents and Parents

This section describes the general background characteristics of the sampled respondents and their parents.

3.3.1 The Respondents' Demographical Characteristics

The number of sampled respondents is 400 and they live in Bangkok Metropolitan. They are aged 35-55 years old, and are both male and female. General background data related to the demographic, socio-economic and family background is presented in Table 3.5

It is found that the average age of the respondents is 44.05 years. Regarding marital status, 77.0% of them are married. Only 6.0% and 6.8% respectively are divorced and/or widowed. 10.3% are separated from their spouse. About 60% of the respondents are salaried employees; of these 33.3% are government officers and 26.5% are private company employees. 15.0% of the respondents have their own businesses with subordinates (employees). The average number of years of formal education is 13.54. 49.4% of the respondents have a bachelor degree or higher and 22.0% has a high school education. It is found that 32.5% of all respondents have income earnings in the range of 10,001 – 20,000 baht per month. The respondents who have earnings of less than 10,000 and within a range of 20,001-30,000 baht per month accounted for a percentage count of 21.8% and 24.5% respectively. Only 4.8% have earnings in excess of more than 50,000 baht per month. The average income per month

is 22,963.24 baht, with a standard deviation 14959.46 and average total family income per month is 56,207.35 baht. By comparing the financial status amongst the respondents who have siblings, 55.73% of them declared that their financial status is the same as that of their sibling, 27.8% are richer and 16.4% are poorer than their sibling(s).

Of all the respondents 48.7% have 2 children and 37.8% have only one child. Only 13.6% of all respondents have more than 3 children. The average number of living children is 1.79 children and the average number of family member is 3.79 persons. For all the 400 respondents, 80.3% have siblings and 19.8% are an only child. For the respondent group who have siblings, 31.6% of the respondents have 1 sibling and 29.1% have 2 siblings. The average number of living siblings is 2.69 persons. Over half of the respondents (53.8%) have only 2 generations in their existing family and 46.2% have 3 co-residential generations.

Table 3.5 Percentage of Sampled Respondents Classified by their Social, Economic and Family Members

Background Characteristics	Percent
Sex	
Male	49.0
Female	51.0
Age (year)	
35 – 39	30.0
40 – 44	31.5
45 – 49	23.3
50 – 55	15.2
$\bar{x} = 44.05$ S.D. = 5.814 MIN = 35 MAX=55	
Marital status	
Married	77.0
Divorced	6.0
Separated	10.3
Windowed	6.7
Occupation	
Government/ Public sector employee	33.3
Private company	26.5
Owner of business with subordinates	15.0
Owner of business without subordinates	14.2
Laborer	7.8
Unemployed	3.2
Education	
Primary school	13.4
High school	22.0
Diploma	15.3
Bachelor/Master/higher	49.3
$\bar{x} = 13.54$ S.D. = 3.537 MIN= 6 MAX = 18	

Table 3.5 (Continued)

Background Characteristics	Percent
Income	
< 10,000	21.8
10,000-20,000	32.5
20,001-30,000	24.5
30,001-40,000	6.0
40,001-50,000	10.5
>50,000	4.7
\bar{x} = 22,963.24 SD = 14959.46 MAX = 58,000 MIN=5,000	
Total family income	
< 15,000	10.7
15,001-30,000	25.7
30,001-45,000	20.3
45,001-60,000	16.0
60,001-75,000	8.3
75,001-90,000	7.0
> 90,000	12.0
\bar{x} = 56,207.35 S.D. = 48978.110 MAX = 320,000 MIN=5,000	
Financial status (compared to siblings)	
Richer	27.8
Equal	55.7
Poorer	16.4
Total number of children	
1	37.7
2	48.7
3	13.6
\bar{x} = 1.79 S.D. = .738 MAX = 5 MIN =1	

Table 3.5 (Continued)

Background Characteristics	Percent
Total number of family members	
2	2.3
3	22.3
4	28.0
5	24.0
6-14	23.6
$\bar{x} = 3.79$ S.D. = 2.114 MIN= 2 MAX= 11	
Number of living sibling(s)	
1	31.6
2	29.1
3	14.9
≥4	24.4
$\bar{x} = 2.69$ S.D. =1.935 MAX = 11 MIN = 1	
Have sibling(s)	
Yes	80.3
No	19.7
Family has 3 co-residential generations	
Yes	46.2
No	53.8
Co-residing with parents (Father or mother, or both)	
Yes	45.2
No	54.8

3.3.2 Parents' Characteristics

Table 3.6 shows that the average age of the father and mother is similar, being 69.7 and 69.0 respectively. 35.7% of fathers are aged over 79 years but nearly half of all mothers (46.3%) are aged between 60– 69 years old and 20.7% are aged over 79 years. It is found that 48.3% of fathers and almost 70% of mothers have a primary education. Only 15.4% of fathers and 12.5% of mothers have a bachelor degree or higher. The average number of years of study of fathers is slightly higher than that of mothers (10.00 years and 8.71 years respectively). Both fathers' and mothers' health is average at 36.6% and 33.6% respectively, but overall both are of good health. Only about 25% of parents have a health status below the average.

Table 3.6 Percentage of Parental Background Characteristics

Parental characteristics	Father (n=273)	Mother (n=345)
Age		
60-69	30.8	46.3
70-79	33.5	33.0
>79	35.7	20.7
\bar{x}	69.7	69.0
S.D.	7.0	7.4
MAX	90	88
MIN	55	55
Education		
No schooling	2.6	5.2
Primary school	48.3	68.3
High school	24.2	9.3
Diploma	9.5	4.6
B.A./ Master/Higher	15.4	12.6
\bar{x}	10.0	8.7
S.D.	3.7	3.6
MAX	18	18
MIN	6	6
Health status		
Feeble	4.4	3.2
Not healthy	5.5	6.7
Less than moderate	11.4	17.7
Moderate	36.5	33.6
Rather healthy	25.3	25.5
Healthy	12.5	8.1
Excellent	4.4	5.2

3.3.3 Background of Co-Residence Characteristics

The underlying background of co-residential arrangements will illustrate the broad picture or overview of intergenerational support between parents and adult children. Table 3.7 shows that more than half of the male sandwich generation's parents move to live with them (54.5%), whereas 61.3% of female sandwich generation members and their family co-reside in the parental home. This result is reflected in many Asian societies where the parents often prefer to co-reside with sons because of cultural norms. It may be that male adult children are expected to be the next pillar of a household, especially in Thai-Chinese families, where parents prefer to co-reside with their male adult children for several reasons, for example providing consultation and advice regarding their household business, and valuing sons more than daughters. Apart from these reasons, it is also their culture (also in some Thai families) that parents should co-reside with a son and the daughter-in-law must also provide care to them. According to Mason's research (1992) the living arrangements of Asian people can be classified into 2 categories: a patrilineal system and a bilateral system, with the bilateral system found in Thailand and Kampuchea incorporating a marginal preference concerning the gender of the child with whom parents want to live.

Apart from gender, the percentage of the sandwich generation (32.3%) who divorce or separate and move to live with their parents is higher than those whose parents move to live with (27.3%). Similarly, Coward and Netzen (1995) indicated that both loss of a job or divorce are two reasons why children move back home. It may seem that parents are still an "umbrella" for children who experience hardship in their own marital life. Furthermore, when adult children lose their spouse parents will move to live with them in order to provide comfort and support, look after grandchildren, i.e. it is an opportunity for parents and children to return to live together again. It implies that divorced daughters receive more help than married daughters, especially if they have to look after their children. In the sandwich generation which still lives with a spouse, the percentage between the two co-residence types is only very marginally different.

When considering income, it is surprising that the majority of the sandwich generation in both groups (who co-reside with parents in parents' house and who co-

reside with parents in their own house) moves back into the parental home, except those whose income ranges between 20,001-30,000 baht/month. It is clearly evident that the percentage of the lowest income group moving to live with the parents is higher than their counterparts. In urban areas such as Bangkok, co-residence may help to economize on the cost of living. It may reduce expenses such as rent for children who do not have their own house, and also reduce the expenses of other family members, for example food costs, water consumption and electricity bills, by once again sharing with their parents. Housing costs affect co-residence and may be more down to aspects of necessity than cultural tradition. Parents and children can save money by living and eating together. This point is especially relevant when housing costs are high or increasing, as in the case in many developing countries (Da Vanzo and Chan, 1994: 97).

It is interesting that the sandwich generation with two children or more have a higher percentage of parents moving in to live with them than those with only one child. Grandparents are the persons who are the most trusted by adult children to rear the grandchildren. Some parents have to move to live with their children to look after their grandchild, a very common occurrence in Thai society.

Table 3.7 Percentage of Selective Background Characteristics of the Sandwich Generation, Classified by Types of Co-Residence

Respondents' characteristics	co-reside in parents' house	co-reside in the sandwich generation's house
Gender		
Male	38.7	54.5
Female	61.3	45.5
Marital status		
Marriage	67.7	72.7
Divorced /Separate/Widowed	32.3	27.3
Income		
<10,000	21.5	11.3
10,001-20,000	31.2	29.5
20,001-30,000	21.5	43.2
30,001-40,000	7.5	4.5
40,001-50,000	10.7	9.2
>50,000	7.6	2.3
Total number of respondents' children		
1	42.0	21.6
2	50.5	55.7
≥ 3	7.5	22.7
	(n= 93)	(n=88)

CHAPTER 4

PARENTAL CAREGIVING AND INTERGENERATIONAL SUPPORT

This chapter presents the results concerning the patterns of parents caregiving among the so-called sandwich generation.

There are 3 types of parents caregiving: physical care; emotional care and financial support. The first section describes parental care providers within the sandwich generation who have siblings and who are single child. The second section presents parental caregiving in detail. The last section describes intergenerational support between the sandwich generation and their parents by focusing on two issues: 1. financial intergenerational support divided into types of living arrangement (co-resident and non-co-resident) and 2. parental support given to the sandwich generation compared by different types of co-residence.

4.1 Caregivers of the Parents of the Sandwich Generation

Nowadays, the trends towards couples having only one or two children are increasing, causing a reduction in family size and thereby affecting the number of persons available to share the care burden for their elderly parents. Moreover, other studies suggest that non-co-residence with parents due to work commitments, marriage, etc. are also affecting the provision of care. As mentioned elsewhere, this study classifies caregiving into 3 different types: physical care, emotional care and financial support. To study the parents' care provider, the sandwich generation is divided into 2 groups: those who have siblings and those who are an only (or single) child, simply because the number of persons sharing these responsibilities differs between these two groups. Previous studies found that the more children elderly parents have, the more support and assistance they are likely to obtain from their children (Lee and Ellithorpe, 1982; Kivett and Maxime, 1984).

In general, though, even with those parents having several children, there will be only one child amongst them which usually takes on the role of primary care giver (Horowitz, 1985). For parents who have only one child, the number of persons available to provide care to them is lower than for parents who have several children. It is therefore interesting to conduct a comparative study between those of the sandwich generation who have siblings and those who are an only child as to who is, or will be, their parents' primary care provider and how different their roles and responsibilities of parental caregiving are or might be.

4.1.1 Primary Parent Caregiver of the Sandwich Generation Having One or More Siblings

Table 4.1 present the third highest ranking percentage of primary caregiver as follow

Physical care: apart from parents themselves, it is found that of the non-co-resident group, 28% of the sandwich generation's parents are taken care of on the personal care level by their sister. The person with the highest percentage of the provision of meals (46.1%) and domestic work (43.5%) is the sandwich generation's sister(s), whereas the sandwich generation has a very low percentage in this type of caregiving. In the co-resident group, the sandwich generation has the highest percentage in the provision of meals and domestic chores. It is worth noting that parents of the sandwich generation in both groups look after their own personal care themselves. This may be due to the fact evident from this study that the majority of the sandwich generation's parents have a moderate or above moderate health status (refer to details in table 3.6).

Emotional care: it is found that for the non-co-resident group, the sandwich generation's sister(s) remain - in percentage terms - the highest provider of care, whereas their brother(s) are second or third in some aspects of emotional caregiving such as escorting parents to a doctor or having an interactive conversation with parents. For the co-resident group, the sandwich generation members are the ones giving the most care of this type - in percentage terms - to their parents.

Financial support: It is also found that for the non-co-resident group, the sandwich generation takes a lesser part in financial support to their parents than those

in the co-resident group. Their percentage in this type of support is third highest in percentage terms, whereas the co-resident sandwich generation has the highest percentage. The parents' total number of children - as a totality - constitutes the second highest proportion of financial support in percentage terms. Siblings of either gender give financial support to their parents to a larger degree than providing care in physical and/or emotional caregiving. The result is in accordance with many studies which found that the responsibility usually falls on women who are daughters rather than sons (Delgado and Tennstedt, 1997; Freudenburg, 1997; Merrill, 1997; Martire, 2003; Smith, 2005).

In summary, for the co-resident group, a higher percentage of the sandwich generation, rather than their siblings, take care of parents in all three types of care giving: physical care, emotional care and financial support. On the other hand, the non-co-resident group takes charge of these responsibilities only in very low percentage terms. In the case of the non-co-resident group, the highest percentage proportion of caregivers for parents in physical and emotional caregiving is the sandwich generation's sister(s). As to financial support, however, all children together form the highest percentage bracket, with the sandwich generation's sister(s) coming second highest in percentage terms. It is noticeable that the sandwich generation's brother(s) are second or third highest in percentage terms when it comes to parent care giving in all three types of care providing, not in the first order. It is because parents co-reside with daughters more than they do with sons (refer to details in table 4.2).

This result is in line with Brakman, (1994) who found that, in general, women carry this burden more than men because the number of daughters living with their parents is three times more than that of sons. It can be estimated that 1/5 of daughters live with their elderly parents. Children who co-reside with their parents are always the primary care givers to the parents because it is clearly evident that children who co-reside with their parents have to adopt more of the care provision duties and responsibilities than those children who live separately from their parents. The study outcome is in accordance with the research done by Dayton and Zimmer (2002) who found that in the elderly persons' families with more than one child, one of the adult children is expected to be the primary caregiver. It implies that children who co-reside are primary caregivers whether or not they have siblings.

Table 4.1 Person Providing Each Type of Care to Parents of the Sandwich Generation Having Siblings and Its Percentage, a Comparison between Living Arrangements

Types of Care giving	First	%	Second	%	Third	%
Non- coresidence (Parents and the sandwich generation)						
Physical care						
Personal care	Parents themselves	33.7	Sister (s)	28.0	Brother(s) (Respondents	8.7 0.5)
Meal provider	Sister (s)	46.1	Parents themselves	14.0	Brother(s) (Respondents	11.8 2.6)
Domestic work	Sister (s)	43.5	Parents themselves	8.7	Brother(s) (Respondents	4.1 1.6)
Emotional care						
Trips	Sister (s)	39.4	Parents themselves	25.9	Brother(s) (Respondents	22.7 1.0)
To visit doctor	Sister (s)	48.7	Brother(s)	27.4	Respondents	1.0
To temple	Parents themselves	38.9	Sister (s)	33.7	Brother(s) (Respondents	18.1 1.0)
To meet friend	Parents themselves	63.2	Sister (s)	16.5	Brother(s) (Respondents	16.0 1.1)
To go shopping	Sister (s)	39.9	Parents themselves	30.0	Brother(s) (Respondents	9.8 1.6)
Conversation	Sister (s)	37.3	Brother(s)	17.0	Respondents	4.1
Financial support						
	All children	33.2	Sister (s)	22.8	Respondents	16.6
Co-residence (Parents and the sandwich generation)						
Physical care						
Personal care	Parents themselves	22.7	Respondents	21.9	-	-
Meal provider	Respondents	35.9	in law	18.0	-	-
Domestic work	Respondents	31.3	in law	19.5	-	-
Emotional care						
Trips	Respondents	36.7	Sister (s)	21.9	Brother(s)	20.3
To visit doctor	Respondents	34.4	Brother(s)	32.8	Sister (s)	30.4
To temple	Parents themselves	30.2	Respondents	25.1	Sister (s)	22.5
To meet friend	Parents themselves	40.6	Respondents	20.4	Sister (s)	19.4
To go shopping	Respondents	46.9	Sister (s)	28.1	Brother(s)	22.7
Conversation	Respondents	38.3	Sister (s)	19.6	Brother(s)	12.6
Financial support						
	Respondents	36.7	All child	24.2	Brother(s)	18.2

As the results from table 4.1, for the non-co-resident group, the sandwich generation's sister(s) is the person providing care to parents at the highest percentage rate. The important reason for this may be the percentage of the sandwich generation's sister(s) co-residing with the parents, compared with other persons. The details of the persons co-residing with parents is shown in table 4.2

Table 4.2 Percentage of Sandwich Generation by Persons Co-Residing with Parents

Persons who co-reside with parents	Parents' condition		
	Both Father and Mother	widowed- father	widowed-mother
Sister(s)	45.5	56.4	48.9
Brother(s)	22.4	8.3	26.7
Relative	7.3	20.8	11.1
Parents live alone	24.8	14.5	13.3
	n=122	n=24	n=45

It is evident from table 4.2 that nearly half of both fathers and mothers (45.1%) co-reside with the sandwich generation's sister(s). This percentage is higher (double) than the percentage of those who co-reside with the sandwich generation's brother(s) (about 22.1%). It is noticeable that only 8% of widowed fathers co-reside with the sandwich generation's brother(s), whereas the percentage of widowed fathers who co-reside with the sandwich generation's sister(s) is highest at 58.4%. It is not

surprising because, generally, gender roles are related to the care provision to the elderly. Numerous examples in relevant literature show that the gender which is in charge of informal caregiving tasks is always female. Studies about daughters' roles and sons' roles in looking after their parents will give information in detail how members of the family perceive their roles in caregiving. The understanding and comprehension of such issues are an essential step in helping families to adjust to their roles in a suitable way in the context of social change.

4.1.2 Primary Parent Caregiver of the Sandwich Generation Who are Single Child

Table 4.3 presents only up to the second highest ranking percentage of primary caregiver due to apart from the sandwich generation who are single child, nearly nobody else give care to their parents.

Physical care: For the non-co-resident group, the highest percentage of care givers of physical care including meal preparation and domestic work, are the parents themselves. The second highest proportion (percentage) of caregivers is the sandwich generation, but for male members of the sandwich generation their wives or maids are taking charge of this task. For the co-resident segment, parents were still the primary care providers for themselves. The reason for this is that the health status for the parents is moderate (refer to details in Table 3.6). The sandwich generation have the second highest proportion in percentage terms.

Emotional care: When considering in detail the emotional care of the sandwich generation living separately from their parents, it is found that neighbors are the ones having the highest percentage of conversation with their parents at 57.7%, with the sandwich generation being secondary care givers at 38.5%. The sandwich generation is the primary caregiver with respect to the escorting on trips, visiting a doctor and going shopping, but parents visit temples or meet friends largely by themselves. For the co-resident segment, the sandwich generation is the one with the highest percentage of conversation with their parents, whereas neighbors are the second largest group in percentage terms at 64.7% and 33.3% respectively. The sandwich generation members are not only primary caregivers of conversation but also are primary caregivers of escorting on trips, seeing a doctor, going to a temple

and going shopping. It is worth noting that the sandwich generation' spouse helps them by sharing this commitment.

As became evident from the interviews conducted, it is interesting to note that the sandwich generation's parents in both groups - especially parents who live alone and reside up country, have neighbors for personal communication and escorting to some activities, for example, to a temple or to local community activities. Furthermore, it is the nieces who provide this type of care. Parents, who live in Bangkok, apart from their family, have pets as their companion and friend, especially during daylight hours when family members go to work or to school. They have occasional conversations with their neighbors. Although there are many activities available for the elderly in Bangkok many of the sandwich generations' parents prefer to stay at home and only go outside with family on weekends.

Financial support: It can be stated that for both the non-co-resident and co-resident groups the sandwich generation is still the primary financial supporter to their parents.

In summary, whether or not the sandwich generation has siblings, if they live with their parents, they are the primary caregivers. For the non-co-resident group of the sandwich generation - who are single child, their parents have to take care of themselves because apart from the only child sandwich generation, almost nobody else provides care for them. However, the parents of the sandwich generation with siblings still receive support from other children even though the overall care provided by the sandwich generation is not equitably distributed amongst the siblings.

Table 4.3 Person Giving Each Type of Care to Parents of the Sandwich Generation
Who are an Only Child, in Percentage Terms, Classified by Living
Arrangements

Types of caregiving	First	%	Second	%
Non- coresidence (the sandwich generation and their parents)				
Physical care				
Personal care	Parents themselves	100.0	-----	----
Meal provider	Parents themselves	73.1	Respondents	57.7
Domestic work	Parents themselves	77.0	Respondents	11.5
Emotional care				
Trips	Respondents	57.7	Parents themselves	30.8
To visit a doctor	Respondents	53.8	Parents themselves	30.8
To visit a temple	Parents themselves	57.7	Respondents	30.8
To meet friend	Parents themselves	77.7	Neighbors	15.4
To go shopping	Respondents	46.2	Parents themselves	38.5
Conversation	Neighbors	57.7	Respondents	38.5
Financial support	Respondents	88.5	Parents themselves	11.5
Co-residence (the sandwich generation and their parents)				
Physical care				
Personal care	Parents themselves	86.3	Respondents	13.7
Meal provider	Parents themselves	45.1	Respondents	37.2
Domestic work	Parents themselves	47.1	Respondents	31.4
Emotional care				
Trips	Respondents	78.4	Parents themselves	21.5
To visit a doctor	Respondents	78.4	Parents themselves	17.6
To visit a temple	Respondents	50.9	Parents themselves	45.1
To meet friend	Parents themselves	70.5	Respondents	29.4
To go shopping	Respondents	68.6	Parents themselves	31.3
Conversation	Respondents	64.7	Neighbors	33.3
Financial support	Respondents	86.3	Parents themselves	13.7

4.2 Parent Caregiving of the Sandwich Generation

This section presents levels and patterns of activities selected to parent care giving of the sandwich generation. The care provision is divided into 3 types: physical care, emotional care, and financial support. The sandwich generation is also classified into male and female because in a social context the caregiving tasks are related to the gender role. The normative expectation about caregiving performed by males and females is different (Yee and Schulz, 2000). The results are as follows:

4.2.1 Physical Care

From table 4.4 it is evident that for both non-co-resident and co-resident groups, the mean (\bar{x}) of the female sandwich generation is higher than that of the male in nearly every aspect of physical of caregiving, with the mean (\bar{x}) of providing meals being the highest. This finding is consistent with numerous studies that found that the tasks of physical caregiving fall on the women's shoulders more than men. Males take part in caregiving in Instrumental Activities of Daily living (IADLs) pattern by generally providing support when going shopping, going to visit the doctor, taking care of financial affairs and medical care more than Activities of Daily Living (ADLs) or direct care (functions and activities relating to personal routine that people usually perform without help such as dressing, bathing, eating, and toileting) (Navaie-Walliser et al., 2002). This may be because some personal care needs a more tender contact which females can provide better than males. It is worth noting that the mean (\bar{x}) of personal care by both male and female sandwich generation members is the lowest when compared with other types of physical of caregiving. This is because parents conduct their personal care by themselves. This result becomes clearer when considering the percentage of distribution (refer to details in appendix B table B1-B2), where it is found that for the non-co-resident group most male and female sandwich generation members never, or rarely, provide this type of care at 95.2% and 86.1% respectively to their fathers and mothers, males never, or rarely, at 91.7%, and females never, or rarely, at 83.7%. These percentages, however, decrease for the co-residence group. It can be clearly seen that the latter group provides meals and helps parents in their domestic chores more frequently than the other group, with more than

half of the female sandwich generation providing meals every day for their father and mother at 57.9% and 54.3% respectively, with the male sandwich generation's percentage being lower than that of their female counterparts (30.8% for father and 31.9% for mother) but still higher than the non-co-resident male sandwich generation.

In conclusion, when considering gender roles, females provide more care to their parents than males, but when considering the living arrangements, the sandwich generation who co-resides with their parents has a mean (\bar{x}) higher than the other group in every type of daily active caregiving (but in this co-resident group, the mean (\bar{x}) of females giving care to parents is still higher than the male's) because this type of care provision need cohabitation or close physical proximity between caregivers and recipients of that care.

Table 4.4 Mean and Standard Deviation of Physical Care to Parents, Classified by Living Arrangements and Gender

Physical Care	Non-co-residence								Co-residence							
	Male n=111				Female n =108				Male n=85				Female n=96			
	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX
Personal care																
Father	1.1 ^a	.56	1	5	1.4	1.1	1	3	2.1	2.1	1	7	2.5	2.4	1	7
Mother	1.2	.94	1	6	1.5	1.2	1	3	2.3	2.3	1	7	2.3	2.2	1	7
Meal Provider																
Father	2.2	1.6	1	6	2.7	1.9	1	6	5.0	2.3	1	7	5.7	2.0	1	7
Mother	2.3	1.9	1	6	2.7	1.9	1	6	5.1	2.2	1	7	5.8	1.8	1	7
Domestic work																
Father	1.1	1.1	1	6	1.5	1.7	1	5	1.8	2.3	1	7	3.0	2.2	1	7
Mother	1.3	1.3	1	6	1.7	1.6	1	5	2.6	2.5	1	7	4.3	2.6	1	7

Note a: Measurement scale for the degree of physical care is

1= never/rarely

2= 1 time/month

3= 2-3 times/month

4= 1 time/week

5= 2-3 times/week

6= 4-5 times/week

7= everyday

4.2.2 Emotional Care

It is evident from table 4.5 that for the non-co-resident group both males and females have means (\bar{x}) lower than those living with their parents. This is in line with the research completed by You (2006: 9) who studied the living arrangements of elderly parents in China and found that co-resident with children increases the frequency of emotional support and communication between children and parents by 60% in urban areas. When considering the details of the non-co-resident group, it is found that the escorts mean (\bar{x}) for fathers by the male sandwich generation is higher than the mean (\bar{x}) for mothers, whereas the mean score (\bar{x}) related to escorts for mothers by the female sandwich generation is higher than the mean (\bar{x}) for fathers, except escorts to a temple and visits to a doctor. This result is in accordance with research by Stoller (1990), stating that when the elders want assistance from someone else rather than their spouses, they usually want assistance from the caregivers of the same sex. Fathers want the assistance from sons rather than from daughters, whilst mothers want the assistance from daughters.

For the co-resident group, base on mean score, it is found that the mean (\bar{x}) of escorts and conversation to mother from the sandwich generation is higher than the mean (\bar{x}) of give this care to fathers. When considering gender role, mostly the male sandwich generation give emotional care to parents (both father and mother) more than female do. Apart from considering the mean value (\bar{x}), frequency distribution will reflect this caregiving more clearly (refer to details in appendix B table B3-B4). It is found that more than half of the co-resident group (of the male sandwich generation) escorts their parents on trips, to see a doctor, to go to a temple once a month, the second rank is more than one time per month and having a conversation with parents 6-7 day per week stands at 88.5% for fathers and 92.6% for mothers. The non-co-resident group never escorts their father or mother on trips (38.4% and 36.9% respectively). The same characteristics are also found for other form of escorting activities. Apart from 'never', 1 time per month is the second rank percentage but the range of percentage between "never" and "1 time per month" rather widely. However, when considering the frequency of conversations conducted, it is found that of the non-co-resident group having conversations with their fathers or mothers 2-3 times per month at 22.6% and 25.8% respectively, with the second rank being 4-5 times per

week at 19.5% for father and 20.6% for mother. Thus, although the percentages of frequency distribution of escorting their parents scores rather low, the high percentage of frequency distribution of conversation to parents may compensate this discrepancy.

In brief, the mean score (\bar{x}) related to emotional care to mothers, either male or female sandwich generation, is higher than the mean (\bar{x}) do to father. Besides, both non-co-resident and co-resident still give emotional care to mother more than do to fathers. This result corresponds with the research of Delgado and Tennstedt (1997) who found that Puerto Rican sons usually help and escort parents to travel to different places while daughters look after personal care. Generally, most co-resident groups escort their parents to places once a month, whereas the highest percentage segment never escorting their parents anywhere is the non-co-resident group. But among the non-co-resident group of the sandwich generation who gives this care to their parents - escorting parents one time per month - constitutes the highest percentage, but this percentage is very low when compared with the co-resident group. However, the percentage of conversation with their parents by the non-co-resident group has a rather high score.

Table 4.5 Mean, Standard Deviation of Emotional Care to Parents, Classified by Living Arrangements and Gender of the Sandwich Generation^a

Emotional Care	Non-co-residence								Co-residence							
	Male				Female				Male				Female			
	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX	Mean	SD	MIN	MAX
Escort^b																
Trips																
Father	2.7	1.9	1	7	2.5	1.8	1	6	4.2	1.9	1	7	3.9	2.0	1	7
Mother	2.6	1.8	1	7	2.6	1.8	1	7	4.2	1.9	1	7	3.8	2.1	1	7
To see doctor																
Father	2.2	1.8	1	7	2.4	1.7	1	6	4.2	1.7	1	7	3.9	1.5	1	6
Mother	2.6	1.9	1	7	2.5	1.8	1	6	4.7	1.3	1	7	4.3	1.4	1	7
To visit temple																
Father	2.2	1.8	1	6	2.3	1.8	1	6	3.6	2.4	1	7	3.9	2.3	1	7
Mother	2.4	1.9	1	7	2.5	1.9	1	6	4.1	2.3	1	7	3.9	2.3	1	7
To meet friend																
Father	1.5	1.4	1	7	1.4	1.2	1	5	2.6	2.1	1	7	2.4	2.0	1	7
Mother	1.5	1.4	1	7	1.5	1.3	1	6	2.6	2.1	1	7	2.2	1.9	1	7
To go shopping																
Father	2.7	2.2	1	7	2.4	1.9	1	6	3.8	2.6	1	7	4.3	2.5	1	7
Mother	2.6	2.2	1	7	2.7	2.1	1	7	4.6	2.4	1	7	4.6	2.2	1	7
Conversation^c																
Father	3.6	2.7	1	7	3.6	2.7	1	7	4.1	3.4	1	7	4.1	3.4	1	7
Mother	4.5	2.4	1	7	4.7	2.4	1	7	5.6	2.7	1	7	5.7	2.5	1	7

Note a : Non-co-residence
 Male: Father n= 85 Mother n= 81
 Female: Father n= 80 Mother n= 88

Co-residence
 Male: Father n= 52 Mother n= 70
 Female: Father n = 57 Mother n= 81

Note b : Measurement scale for the degree of escort is
 1= never/rarely 5= every 2-3 month
 2= 1 time/year 6= 1 time/month
 3= every 6-7 month 7= more than 1 time/month
 4= every 4-5 month

Note c : Measurement scale for the degree of conversation is
 1= never/rarely 5= 2-3 times/week
 2= 1 time/month 6= 4-5 times/week
 3= 2-3 times/month 7= everyday
 4= 1 time/week

4.2.3 Financial Support

In order to study the financial support provided to parents, the sandwich generation is classified into 2 groups: 1. non-co-resident with parents and 2. co-resident with parents. Studies of the different types of financial support, parental income sources, and percentages of income per month given to parents are presented as follows.

Table 4.6 Percentage of Frequency of Financial Support to Parents, Classified by Living Arrangements and Gender

Frequency of financial support	Non-co-residence		Co-residence	
	Male	Female	Male	Female
Father				
Monthly	45.0	40.0	38.5	40.4
Occasionally	38.7	53.7	44.2	38.5
Never	16.3	6.3	17.3	21.1
	n=85	n=80	n=52	n=58
Mother				
Monthly	49.5	44.6	50.0	61.7
Occasionally	39.4	54.3	42.9	30.9
Never	11.1	1.1	7.1	7.4
	n=81	n=87	n=70	n=81

Table 4.6 shows that in non-co-resident groups the monthly male support money to father and mother stands at 43.0% and 49.5% respectively, with the percentage of the money given by females to parents per month being less than the male's. Female sandwich generation members provide monthly support at 40.0% for fathers and 44.3% for mothers. Even the percentage of males giving money to parents monthly is more than females' but it is noticeable that the percentages of males who never give money to parents is higher than the female's at a ratio of about 2:1 for

fathers (15.3% and 6.3%) and 10:1 for mothers (11.1% and 1.1%). The male sandwich generation gives monthly financial support to their fathers at a lower rates than females, namely at 38.5% and 40.4% respectively and for mothers at 50.0% and 61.7% respectively. This is supported by Hogan, Eggebeen and Clogg (1993) who found that in American families, women in each generation are more likely to give financial assistance rather than men. It is noticeable that the percentages of co-resident groups - both male and female – who never give money to parents are higher than for those who live separately from parents. Table 4.7 shows the background of parental income sources, illustrating the parents' financial condition.

From Table 4.7, it is found that both non- co-resident and co-resident groups whose income constitute the lowest group (less than 10,000 baht/month), parental income sourced from working scored the highest percentage in comparison with the other groups, at 34.0% and 33.3% respectively for fathers. In addition the money provided only occasionally by the sandwich generation constitutes the main income source for fathers of the non- co-resident group at 40.4 % and fathers of the co-resident group at 44.4 %. For mothers, the non-co-resident group occasionally gives money as the main income source at 55.8%. This corresponds with research by You' (2006) who found that financial support from children to parents is one of the main old-age pillars of support for the elderly in China in the past and still is the main financial source for the elderly in rural China where retirement pensions are not widespread.

It is noticeable that percentages of the sandwich generation whose father or mother are still working, are reduced in the sandwich generation group whose income has increased. Besides, the more income they can earn, the more they can contribute to monthly payments to the parents. Moreover, their parents, especially fathers, have their own pension or another source of income. It may be the sandwich generation's father in higher income groups having a better education and occupation than the sandwich generation' father in lower or lowest income groups because more than half of parents of the sandwich generation with lowest income have an education at primary level only. Generally, it is found that the percentage of non-co-resident or resident groups giving monthly financial support to mothers is higher than that for fathers. However, these results are based on a small number of cases

Table 4.7 Percentage of Parents' Income Sources, Classified by the Sandwich Generation's Income per Month and Living Arrangements

Parents' income sources	Sandwich generation's income/month											
	<10,000		10,001-20,000		20,001-30,000		30,001-40,000		40,001-50,000		>50,000	
	Non-co-residence	Co-residence	Non-co-residence	Co-residence	Non-co-residence	Co-residence	Non-co-residence	Co-residence	Non-co-residence	Co-residence	Non-co-residence	Co-residence
Father												
Working	34.0	33.4	30.2	18.7	7.3	2.2	10.0	--	20.7	7.7	14.3	20.0
Pension	4.3	5.5	1.2	16.7	22.0	37.8	30.0	42.9	20.7	46.1	28.6	20.0
Monthly	21.3	16.7	32.5	31.3	48.7	24.4	40.0	42.9	44.8	38.5	57.1	60.0
Occasionally	40.4	44.4	36.1	33.3	22.0	35.6	20.0	14.2	13.8	7.7	--	--
	n=47	n=18	n=83	n=48	n=41	n=45	n=10	n=7	n=29	n=30	n=7	n=5
Mother												
Working	21.2	21.2	31.6	19.0	6.3	6.3	--	--	19.3	--	--	--
Pension	--	3.0	--	12.1	14.5	31.7	10.0	30.8	9.7	23.5	--	9.1
Monthly	23.0	39.5	39.7	43.1	54.2	22.0	30.0	46.1	54.8	64.7	90.0	63.6
Occasionally	55.8	36.3	28.7	25.8	25.0	40.0	60.0	23.1	16.2	11.8	10.0	27.3
	n=52	n=33	n=98	n=58	n=48	n=63	n=10	n=13	n=31	n=17	n=10	n=11

In conclusion, parents of the lowest-income group are the most vulnerable elderly parents because almost none of them draw a pension and possibly don't have enough savings to support their life. Furthermore, the sum of money given by the children to some of the sandwich generation's parents working in agriculture in rural areas or working as unskilled labor in urban areas, is less than actually needed. This result is similar to what Youssoufa (2006) found, namely that a relatively high level of labor force participation among older adults in Cameroon reflects the lack of comprehensive old age pension system in that country. Besides, in the absence of any social security in the informal and agricultural sector, the elderly fare badly and this is even more valid for female workers.

When considering overall, the sandwich generation assists mothers more than fathers. It is in line with earlier research that fathers receive less support from children than mothers may be because mothers invest more time and energy into their children than fathers do. Furthermore, mothers tend to outlive their husbands and are less likely to have spouses available to serve as care givers (Stone et al., 1987). However, another reason is the fact that normally mothers have a lower income than fathers. Chadha and Malik (2004) found that mothers with a low income are more likely than fathers to receive a higher level of filial support from their children. Given the norm of reciprocity, it can be expected that the comparative low investments of fathers in young children will, at a later stage, result in fathers receiving less support (Rossi and Rossi, 1990; Spitze and Logan, 1990). Generally, caregiving is a female role, a fact that remains valid even in an exchange support relationship. Ingersoll-Dayton et al. (1996) report that caregivers receive more help from their mothers than from their fathers. When helping older mothers, caregivers are more likely to be involved in reciprocal exchanges. They both give and receive more help in relation to their mothers as compared to their fathers.

Apart from the result mentioned above, it is interesting that the direction of flow and the percentage of income given to parents are different between the sandwich generation who co-reside with their parents in the parents' house and the sandwich generation who co-reside with their parents in their own house. The result is shown in Table 4.8

Table 4.8 Percentage of Sandwich Generation Who Give Their Income to Parents,
Classified by Co-Resident Types

Financial support to parents	Father		Mother	
	Co-reside in parents' house	Co-reside in the sandwich generation' house	Co-reside in parents' house	Co-reside in the sandwich generation' house
Percent of income given to parents				
1-5%	40.5	48.8	40.3	46.6
6-10%	27.0	34.9	19.4	29.3
11-15%	16.2	9.4	13.4	17.2
>15 %	16.3	6.9	26.9	6.9
	n= 37	n= 43	n= 67	n= 58
Frequency of financial support				
Monthly	45.0	34.0	65.5	46.3
Occasionally	30.0	54.0	26.2	47.8
Never	25.0	12.0	8.3	5.9
	n=60	n=50	n=84	n=67

The results shown in Table 4.8 indicate the main upward flow of support from adult children to parents. Nearly half of the sandwich generation in both groups give 1-5% of their income to their parents, but the percentage of those who move to co-reside with parents in the parents' house and give money (in percent of their total income) provide 11-15% of their income (except mother) and >15% to parents higher than the sandwich generation counterpart. That is, children increase the financial support to their parents when they receive benefits from their parents in the form of housing. The elderly parents can be an essential housing resource for the adult children which helps save on expenses or resulting in the adult children having to pay only a part-expense.

Besides, it may be that the elderly parents who own a house are less likely to co-reside with children because they have sufficient resources to live independently or, moreover, have the ability to support their children in the form of housing or any other type of assistance. You (2006) found that co-residence in urban areas in China is driven by the children's requirements; such as taking care of grandchildren and housework. As the reasons for benefits received from parents in form of staying in the parental home, it is not surprising that the sandwich generation who co-resides in the parents' house provides money on a monthly basis to parents at 45.0% for fathers and 65.0% for mothers whereas the sandwich generation who co-resides in their own house only occasionally gives money to their parents at 54.0% for fathers and 47.8% for mothers. It is noticeable that the sandwich generation who co-reside in the parents' house never give money to their father at 25%. This percentage is higher than ones who live in their own house at 12.0% only. It may be the parents who have their own house have a better education and financial status than parents who move in to live in the children' house and they still have an income source from working.

Moreover, Ruggles and Heggeness (2008) found trends in intergenerational co-residence in 15 developing countries where families - with a member of the older generation as the head of the household - are becoming more common in most countries, whereas intergenerational families headed by a member of the younger generation are on the decline in most of the countries. The result suggested that housing shortages, economic stress in the younger generation, and old-age pensions may contribute to this change. Also, in some developing countries, rising income may

have allowed more people to attain their preferred family structure of intergenerational co-residence, thereby following traditional family forms and structures. The sandwich generations, who own their house, give money to co-residing parents to a lesser extent than the other group because it may be that they already support their parents in form of residence, household expenses and care giving. This is in accordance with the studies of intergenerational exchange by Pezzin et al., (2006) who found that children owning their own house give less money to the parents when compared with those whose parents live in the parental home. Although this appears like the outcome of mutual altruism, it also implies the possibility of an exchange motive.

Apart from financial support as described above, medical fees are one of the most important expenses for both parents and the adult children, especially for elderly parents who have a chronic illness. Thus, a study of the sources of medical expenses for parents will help to better understand the financial support to parents and who carries this burden. The results shown in Table 4.9 found that a main source of funding for parental medical expense is welfare support from their children or themselves, but when considering the sources of medical expenses for parents in detail, it is found that the co-resident group pays more medical expenses than the non-co-resident group. This difference is approximately two-fold for fathers and one-fold for mothers.

Table 4.9 Percentage of Parental Medical Expense Source, Classified by Living Arrangements

Source of medical expense	Father		Mother	
	Non-co-residence	co-residence	Non-co-residence	co-residence
Respondents pay all	9.2	21.1	12.3	23.1
Respondents' welfare	14.6	13.8	14.4	16.3
Parents' welfare	21.3	34.0	15.1	24.5
Sibling's welfare	24.4	10.1	26.7	15.0
Elderly welfare card	23.8	17.4	21.3	19.0
Sibling support money	4.3	3.6	9.7	2.1
Nobody support money	2.4	- -	0.5	- -
	n=164	n=109	n=187	n=147

4.3 Support From Parents to the Sandwich Generation

Generally, caregiving or support among family members is a reciprocal exchange (Velkoff and Lowson, 1998). The mutual assistance between the adult children and their parents is not unidirectional, but reciprocal. This section presents the direction of flow of support from parents of the sandwich generation, which helps illustrate the concept of parental caregiving more clearly because the result of the study will present reciprocal intergenerational support - not only emanating one-sidedly from the children. This research classified the support by living arrangement criteria (non-co-residence and co-residence), based on the notion that living arrangements are a fundamental determinant of interaction between parents and children. The geographic proximity between elderly parents and adult children is the most important factor which results in the parent-child relationship and also includes the exchange of support to each other. The levels of each support type are divided into 3 levels: below moderate, moderate and above moderate. (details in chapter 3)The

results regarding the support given by parents to the sandwich generation is shown in Table 4.10

From Table 4.10 it is found that the percentage of father and mother of co-resident group giving all types of support at above moderate level to the sandwich generation, which is higher than the percentage of father and mother of the non-co-resident group (above moderate level). These support characteristics are similar to parent caregiving of the sandwich generation. When considering gender the percentage of financial support to female sandwich generation by both father and mother is at above moderate level and higher than the percentage of the fathers' and mothers' support to the male sandwich generation but they give more counseling to the male sandwich generation than to the females. When considering in detail, fathers provide money to the female sandwich generation at above moderate levels at 15.0% but the support to the male sandwich generation at this level is only 9.8%. Mothers support money to females at above moderate level at 15.3% whereas financial support to the male sandwich generation at this level is only 6.5%. For the co-resident group it is found that both father and mother assist grandchild-rearing (child care) to the female sandwich generation to a larger extent than to the male sandwich generation. It is noticeable that fathers and mothers give counseling and financial support to the male sandwich generation to a higher degree than they do to the females, which is different from the non-co-resident group where fathers and mothers give more counseling and financial support to the females rather than to the males.

Table 4.10 Percentage of Parents' Support to the Sandwich Generation, Classified by Living Arrangement Types and Gender

Types of parental support	Non- co-residence				Co-residence			
	Father		Mother		Father		Mother	
	Male	Female	Male	Female	Male	Female	Male	Female
Grandchild-rearing								
below moderate	65.5	58.7	62.8	59.2	10.0	19.3	1.5	13.6
moderate	21.5	23.8	21.3	21.4	42.0	26.3	28.4	12.4
above moderate	13.0	17.5	15.9	19.4	48.0	54.4	70.1	74.0
Counseling								
below moderate	32.1	35.0	24.5	32.6	11.8	8.8	4.4	9.9
moderate	20.2	30.0	24.5	29.6	13.7	21.1	11.8	17.3
above moderate	47.7	35.0	51.0	37.8	74.5	70.1	83.8	72.8
Financial								
below moderate	70.5	60.0	75.3	59.2	52.0	40.4	44.8	44.4
moderate	19.7	25.0	18.2	25.5	22.0	42.1	23.8	32.1
above moderate	9.8	15.0	6.5	15.3	26.0	17.5	31.4	23.5
	n=84	n=80	n=94	n=98	n=50	n=57	n=67	n=81

As mentioned above, the sandwich generation and parents who live together, support each other more than those who live separately because co-resident between parents and children increases the opportunity of exchanging support for each other. Co-resident is a complex exchange, which is generally responsive to the needs of both sides (Muchier and Burr, 1988).

To study the support of co-resident groups, co-resident types were divided into 2 types: co-residing with parents in the parents' house and co-residing with parents in the sandwich generation's house by focusing on parents' support in 3 types: grandchild-rearing (child care), counseling and financial support. The response scale for each item is below moderate, moderate and above moderate. (details in chapter 3)

From Table 4.11 it is generally found that the sandwich generation who co-resides with parents in parents' houses, receives more support from parents than the other group. For grandchild-rearing, 64.4% of the sandwich generation's fathers help to look after the grandchildren at above the average levels whereas in the other group receiving this help from fathers on this level is only 36.7%. For this support from mothers of the sandwich generation who coreside in the parent's house still receive more of this support from mothers than the other group. These results clearly indicate that grandchild-rearing is an important role of elderly parents in assisting adult children. Exchange of support is more common in adult children - parents dyads / each other where there are grandchildren (Eggebeen and Hogan, 1990). This may be especially important for women participating in the workforce. Although it is common to employ domestic maids to help with childcare and household chores, grandparents, especially grandmothers, are seen as the best choice for child care and are entrusted with teaching children how to behave, instilling proper values and developing language skills.

When interviewed, female sandwich generation members stated the advantage of living with their parents as

“... The biggest benefit of cohabiting is that my parents can help me to look after my children. Without my parents, I may have to quit my job in order to take care of them by myself because my children are too young (2 years and 4 years). I can't leave them alone with the

maid, or in nursery day care, can I? It is another choice but not the best. I prefer my mom...”

These reasons are clearer when considering Table 3.7 (chapter 3) which shows that the more children the sandwich generation has, the higher the percentage of parents who move in to live with them. It is clearly evident that the sandwich generation who co-resides in the parents' house, receives more support from their parents than the other group (except counseling), especially financial support. 32.2% of the sandwich generation, who co-resides in the parental home, receive financial support from fathers at above moderate level, whereas only 8.1% of the sandwich generation whose parents coreside in the sandwich generation's house, receive financial support from parents at above moderate level. This difference of percentage between the two groups (co-residing in the parents' house and co-residing in the sandwich generation's house) is about four-fold the financial support from fathers and nearly three-fold the financial support from mothers. So, apart from receiving accommodation support from parents, the sandwich generation also receives financial support and parents help to look after their children. It emphasizes the direction of transfer from parents to children. This indicated flow of support is in a 'downward' direction from parents to children.

Table 4.11 Percentage of Parents' Support, Classified by Co-Resident Types

Parents' support	Father		Mother	
	Co-reside in parents' house	Co-reside in respondents' house	Co-reside in parents' house	Co-reside in respondents' house
Grand- child rearing				
below moderate	15.3	14.3	8.5	6.1
moderate	20.3	49.0	13.4	27.3
above moderate	64.4	36.7	78.1	66.6
Counseling				
below moderate	13.3	6.2	8.4	4.6
moderate	18.4	16.3	18.1	10.6
above moderate	68.3	77.5	73.5	84.8
Financial				
below moderate	39.0	55.1	36.6	54.5
moderate	28.8	36.7	25.6	31.9
above moderate	32.2	8.2	37.8	13.6
	n= 59	n=49	n=83	n=66

It is interesting to note why the sandwich generation co-residing in the parent's house receives grandchild-rearing and financial support from parents to a larger degree than the other group.

When considering parental demographic characteristics (level of education, health status and income, refer Table 4.12) it is found that the percentage of parents' education level at diploma /bachelor degree of the sandwich generation who co-resides in parents' house is higher than parents' of the other group. (32.3% and 29.5% for fathers and 25.8% and 17.1% for mothers). Moreover, the health status which is divided into 3 levels: below moderate, moderate and above moderate, the percentage at 'above moderate' of parents of the sandwich generation who co-reside in parents' house is higher than parents of the other group as well. When considering the parents' income, it is found that in the sandwich generation group who co-resides in the parents' house, the percentage of their parents who have income from work or a pension, is higher than the other group. It implies that parents in this group have their own income and sufficient means to support their children.

Table 4.12 Percentage of Parents' Characteristic, Classified Coresidence Types

Parents' characteristic	Father		Mother	
	Co-reside with respondents in their own house	Co-reside with respondents in respondents' house	Co-reside with respondents in their own house	Co-reside with respondents in respondents' house
Education level				
no attain school	3.2	--	6.5	2.3
primary/secondary/ high school	62.3	70.5	63.4	80.7
diploma/bachelor	32.3	29.5	25.8	17.0
master or higher	2.2	--	4.3	--
	n=91	n=88	n=92	n=86
health status				
below moderate	20.0	6.0	20.2	18.2
moderate	25.0	58.0	27.4	44.0
above moderate	55.0	36.0	52.4	37.8
	n=91	n=88	n=92	n=86
income source				
working	20.0	13.7	19.1	11.5
pension	33.3	31.6	26.2	21.7
income from children/others	46.7	54.7	54.7	66.8
	n=60	n=51	n=84	n=70

In summary, the parents' characteristics; education level, health status and income of parents of the sandwich generation group who co-reside in parents' house, are better than those of the parents in the other group. It implies that these parents

have better resources to support their children (house, money and physical capacity) than those parents who co-reside in their children's house. These results support a 'downward' flow direction (parents to children) and 'upward' flow direction (children to parents) which is described previously, reflecting that parents and the sandwich generation support each others in reciprocal directions.

It is interesting to study the reasons of parental caregiving of the sandwich generation in that it will help a better understanding of their parents' caregiving. The results shown in table 4.13

Table 4.13 Percentage of Reasons of Parents Caregiving, Classified by Living Arrangements

Reasons of caregiving	Non-co-residence	n	Co-residence	n
Gratitude	92.2	219	93.4	181
Parents' geriatric health problems	35.2	219	47.5	181
Parents don't have income	31.5	219	28.7	181
Parents don't have confident to live alone	5.2	219	6.1	181
Parents don't have other child care for	2.8	219	8.8	181
Parents don't have home	0.5	219	5.5	181

From Table 4.13 it is found that gratitude is the highest percentage as to the reason for parents caregiving of the sandwich generation, with the parents' geriatric health problem ranking second in importance. Parents not having an income is the third reason for both groups. Gratitude is the first rank of reasons for parents' caregiving of both non-coresidence and co-residence groups at 92.2% and 93.4% respectively, this being in line with many publications in many developing countries

where adult children are usually willing to care of their parents, with their views regarding norm of filial piety often expressing those held by parents. Filial responsibility expectations held by parents are defined as the extent to which adult children are believed to be obligated to support their aging parents (Chadha and Malik, 2004).

Gratitude is the most important reason of parent caregiving but the result of this intergenerational support study shows that receiving support from parents has important effect on parent caregiving as well. Yamamoto and Wallhagen (1997) studied the continuation of family caregiving in Japan. They compared the care given by western societies as “end up with care given because no one else would take on the role” while in Japan it is easily accepted because it is “simply an assigned, expected role”. Inversely, Pezzin (2006) - studying Japanese future parental care - found that parental care is not motivated by altruism. That is, children give parental care when their parents are sufficiently wealthy to enable the children to meet their parents’ care needs. This tendency will increase as more daughters (and daughters-in-law) join the full-time work force. This research suggests that we should not rely too much on altruism within families. Declining family care should be replaced by market care services. Korean elderly, as well as the young generation, put more value on two way intergeneration relations based on mutual care and assistance, rather than simply following the traditional norm of filial piety.

CHAPTER 5

FACTORS INFLUENCING PARENTAL CAREGIVING

This study has focused on the examination of four factors that have an influence on caregiving: sandwich generation characteristics, parent characteristics, living arrangement and sibling's parents caregiving. A selection of independent variables to be analyzed were derived from a review of relevant literature, concepts and related theories. The dependent variables for parental caregiving can be divided into 3 types, listed as follows: physical caregiving, emotional caregiving and financial support. Independent variables to be analyzed are both dichotomous and interval variables. By using the Hierarchical Multiple Regression Analysis, independent variables which are used to explain the dependent variables were verified. All these variables are included in a correlation analysis to assess the level and form of correlation and to prevent any multicollinearity problem, as shown in appendix C under Table C1-C6.

5.1 Factors Influencing Physical Caregiving

Tables 5.1 and 5.2 show the results of Hierarchical Multiple Regression Analysis for father's and mother's models, respectively. It is found that the sandwich generation characteristics factor can explain 27.5% and 26.5% of the variation in the dependent variable (physical caregiving) for father and mother respectively. For both father and mother, the variables of the factor which influence the dependent variable with a statistical significance level at .001 ($F=11.004$ and 13.358 respectively) are arranged in order base on their Beta values: number of family members, sex, marriage, total income, and total number of children. The last two variables have a negative relationship. For mother, the variables of the demographic factor which influences the dependent variables with a statistical significance are arranged in order

of the Beta coefficients: number of family member, sex, total income, and marriage. The last two variables have a negative relationship.

According to model 2, when added parents characteristics into the model, it is found that R^2 increases from .275 to .376 (father's model) and .265 to .336 (mother's model). The amount of increase is statistically significance at level .001 ($F=9.934$, $F=10.754$ respectively).

When considering variables influencing fathers, the variables which influence the dependent variable remain unchanged. The independent variables which influence the dependent variable with a statistical significance are arranged in order of the Beta coefficients, namely: number of family member, grandchild-rearing, counseling, sex, marriage, total income, and number of children. The last two variables have a negative relationship.

For mother, sandwich generation characteristics factor which influence the dependent variable remain unchanged as well. The independent variables which influence the dependent variable with a statistical significance are nearly similar to the father's, arranged in order, namely: number of family member, counseling, sex, marital status, total income, mother's health, and number of children. The last two variables have a negative relationship.

When the living arrangement is further added into the model as shown in model 3, R^2 increases from .376 to .402 (father's model) and .336 to .351 (mother's model). The amount of increase is statistically significance at level .01 $F=10.204$ (father's model) and at level .05 $F=10.583$ (mother's model). The sandwich generation characteristics variables which influence the dependent variable in model 2 remain unchanged, except for the total income. The non-co-residence variable has a negative relationship for both father and mother.

In the final step (model 4), when the sibling factor is included in the analysis, it is found that R^2 only increases from .402 to .403 (father's model) and .351 to .352 (mother's model). The amount of increase is not statistically significance for both father and mother.

In summary, among three factors that are hypothesized to influence on parents physical caregiving: the sandwich generation characteristics factor, parents characteristics factor, living arrangement factor, and sibling factor, parental factor is

the most important in determining parents physical caregiving for both father and mother.

When considering father physical caregiving in details, the sandwich generation characteristics variables which influence the dependent variable are **arranged in order of the Beta coefficients**: number of family members, sex, marriage, total income and number of children, with the last three variables having a negatively influence. Non-co-residence has a negative influence on parent caregiving. In addition, parents' counseling and grandchild-rearing have a positive influence but the number of siblings and the physical care from siblings do not have any significant influence.

For the mother physical caregiving, all variables which have a statistical significance in model 1, 2 and 3 remain unchanged. The independent variables with a statistical significance are arranged in order **of the Beta values**: number of family members, sex, counseling, mother's health, non-co-residence, and number of children. The last three variables have a negative relationship

The result suggests that the number of family members within one family unit is positively related to the parents physical caregiving, by having more persons sharing the care provision. In a larger family with many siblings or relatives cohabiting or having outside staff (maids, servants), they may help each other to take care of elderly members. The size of the family is related to the well-being of the elderly and will promote intergenerational support and reduce loneliness on the part of the elderly. However, it cannot be concluded that a big family is related to care giving to the elderly per se, with the relationship between family members being more important. This research finds a good relationship between the sandwich generation and their parents, the sandwich generation and their sibling(s), the sandwich generation's parents and the sandwich generation's sibling(s). (details appendix B table B9)

It is not surprising to find that gender (female) positively influences the dependent variable because generally, physical caregiving (i.e. personal care, meal providing, domestic chores) is a woman's task. This finding is consistent with Horowitz (1985); Velkoff and Lawson (1998), who found that, according to tradition, women in all societies - be wives, daughters, daughters-in-law or nieces - have to be

elderly primary caregivers in their families, especially in regard to intimate, personal care.

The total family income has a negative impact on caregiving. The more income is derived, the less physical care is given to parents by the children themselves. It may be the case that most of them have to work and they have enough money to hire a maid to perform care giving tasks. This is consistent with the standard economic theory predicting that the higher the value of an adult child's time, the more likely it will be that the child will make a financial rather than a time transfer. Households with individuals earning high wages rely on relatively more on cash transfers and relatively less on time transfers than do lower-wage households (Couch et al., 1999).

The marital status of the sandwich generations is one of the variables that are statistically significance. Those who are currently married provide physical care their parents less than those who are not currently married. It may be they have to work and also look after their own family. Quoting from the interviews conducted for this study, one of the sandwich generation - a university lecturer - explained her burden:

“...this year my husband (56 years) contracted a chronic illness, now all burden falls on me, above all, I have to look after my husband who is nearly immobile. Last month I sent my mother (84 years) to a private nursing home but I visit her frequently, as much as I can...”

“... I have 2 sons (12 years and 15 years), I quit my job in the last three months because my son (15 years) has cancer and needs to be closely looked after, especially regarding food and emotional care. My house is not far from my parent's house, only 30 minutes, but because of the illness of my son, I have no time to meet them unless they visit their grandchild...”

The numbers of children of the sandwich generation also insert a negative influence on caregiving because adults have to look after their children, sometimes beyond the age of 18 years, which is an age western societies already classify as being a “young adult”.

However, it may be not only family burdens obstructing the sandwich generations who are married to give care to their parents, but living arrangement also influence on parents caregiving. The number of sandwich generation who married and co-reside with parents less than the number of who separated / widowed or divorced.

Only 41.6% of the sandwich generation who married co-reside with their parents whereas over half of the sandwich generation members who are separated, divorced or widowed (57.6%) co-reside with their parents. (Details table 4.11) This finding corresponds with the study of Brody et al., (1995); Coward and Cutler (1991); Coward, (1992) who found that unmarried, divorced, and widowed daughters are more likely to share a household with parents than those who are married. Besides, Brody, Litvin, Hoffman and Kleban, (1995) found that never-married daughters, followed by the widows, provide a large proportion of the total hours of care, with their contribution being more than that of others who are married, separated and /or divorced.

Geographic proximity is one of important variable for physical caregiving. Non-cohabitation of sandwich generations with their parents has negative influences on caregiving because physical care has to be provided regularly, everyday or nearly everyday. Consequently, the non-co-resident sandwich generation has less opportunity to provide care compared to those who co-reside with their parents. It is found from the interviews that parental residence in upcountry, regional areas is an obstacle to the sandwich generations giving as much care as they would like. However, they compensate by sending items such as dry food, clothes, medicine etc. by post or through relatives or friends who travel to the regions. Geographic proximity is also reflected in the degree and type of assistance offered by parents. Parents' support: rearing of grandchildren and the providing of good counsel having a positive impact on the overall caregiving. When looking in closer detail, most parents who assist with the above usually co-reside with the sandwich generations (details in appendix B table B7) and it imply reciprocal support between the sandwich generation and their parents as well.

Table 5.1 Hierarchical Regression Analysis to Study the Determinants of Father Physical Caregiving of the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	4.005	-1.722	7.537	7.300
Sandwich Generation				
SEX	.175**	.137*	.145*	.149*
AGE	.010	-.012	-.022	-.027
MARRIAGE	-.140*	-.171**	-.135*	-.128*
EDUCATION	.097	.007	-.004	-.015
TOTAL INCOME	-.094*	-.104**	-.103	-.104*
TOTAL CHILDREN	-.022**	-.030**	-.050**	-.052**
FAMILY MEMBER	.439***	.333***	.190*	.188*
PARENTS				
AGE		.061	.049	.063
HEALTH		-.018	-.043	-.043
GRANDCHILD-REARING		.216**	.172*	.165*
COUNSELING		.196*	.167*	.167*
FINANCIAL		-.009	.030	.035
Non-co-residence			-.237**	-.240**
SIBLING				
NUMBER OF SIB				-.037
PHYSICAL CARE				.013
<hr/>				
R²	.275	.376	.402	.403
F-test	11.004***	9.934***	10.204***	8.790***
R² Change		.101	.027	.001
F-test		6.390***	8.766 **	.161

Note : * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

Table 5.2 Hierarchical Regression Analysis to Study the Determinants of Mother Physical Caregiving of the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	1.651	2.750	10.053	9.710
Sandwich Generation				
SEX	.137*	.150**	.146**	.142**
AGE	.048	.061	.057	.057
MARRIAGE	-.167**	-.164**	-.125*	-.127*
EDUCATION	.102	.052	.047	.049
TOTAL INCOME	-.122*	-.082*	-.077	-.077
TOTAL CHILDREN	.000	-.006	-.015**	-.015**
FAMILY MEMBER	.446***	.390***	.292***	.295***
PARENTS				
AGE		-.026	-.053	-.049
HEALTH		-.151**	-.155**	-.158**
GRANDCHILD- REARING		.108	.027	.023
COUNSELING		.197**	.193**	.196**
FINANCIAL		-.015	.016	.016
Non-co-residence			-.187*	-.178*
SIBLING				
NUMBER OF SIB				.003
PHYSICAL CARE				-.023
<hr/>				
R²	.265	.336	.351	.352
F-test	13.358***	10.754***	10.583***	9.115***
R² Change		.072	.015	.001
F-test		5.493***	5.998*	.076

Note: * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

5.2 Factors Influencing Emotional Caregiving

Tables 5.3 and 5.4 - displaying the result of Hierarchical Multiple Regression Analysis - found that **the sandwich generation characteristics factor** can explain 21.1% and 23.8 % of the variation in the dependent variable (emotional care giving) by the sandwich generations to father and mother respectively. Both father's and mother's model, the statistical significance level at .001($F=7.778$, $F=11.667$ respectively). The variables of sandwich generation characteristics factor which influence on the dependent variable with a statistical significance, arranged in order base on their Beta values are education level and total number of family members.

When the parents factor is added into model 2, R^2 increases from .211 to .375 (father's model) and .238 to .371 (mother's model). The amount of increase is statistically significance at level .001 $F=9.886$, $F=12.557$ respectively. For fathers, the variables which statistically significantly influence on the dependent variable in model 1 remain unchanged in this model. The independent variables with a statistical significance arranged in order of the Beta coefficients are father's grandchild-rearing, total number of family members, educational level, and father's age. The last variable has a negative relationship. When considering the variables influencing the mother's care giving, the independent variables with a statistical significance, arranged in order base on their Beta values are education, number of family members, sandwich generations' age, grandchild-rearing (child care) and mother's age. The last variable is negatively related to the parents emotional caregiving. It is worth noting that this relationship is similar to that of fathers.

When the living arrangement factor is included into model 3, R^2 increases only .002 (father's model) and .003 (mother's model). The independent variables, which impact on the dependent variable in model 2, remain unchanged for both father and mother in this model but living arrangement (non-co-resident) is negatively related to the parents emotional caregiving.

Regarding the model 4, when the sibling factor is added into the model, it is found that all independent variables together can accounted for 38.1% and 37.9% of the variation in the dependent for fathers and mothers respectively but no significance level in this model (R^2 increases only .004 for both father's and mother's model). The

independent variables which used to statistically significantly influence the dependent variable at the model 2 and model 3 remain unchanged in this model for fathers and mothers. The sibling factor does not statistically significantly influence the dependent variable for both fathers and mothers.

Similar to parents physical caregiving, among three factors that are hypothesized to impact on parents emotional caregiving: the sandwich generation characteristics, parents characteristics, living arrangement, and sibling factor, parents characteristics still to be the most important factor. Especially grandchild-rearing variable has a positive relationship for both parents physical caregiving and emotional care.

The parents' age is negatively related because part of emotional care giving in this research focuses on parents' activities and concerns parents' physical ability: the higher the parents' age, the less their health is conducive to activities because energy and functional ability of aging people decreases as a consequence of health conditions, affecting both the individual and the individual's social network (and leisure companions) (Agahi,2008). But it is noticeable that parents assisting grandchild-rearing have a positive relationship with the emotional caregiving. It may be that the parents who look after grandchildren will be involved with family activities and this reflects intergenerational exchange as well.

“...sometimes my mother joins us to go to the beach, I would like her to relax after staying at home to look after the grandchild but normally she likes to go to the temple on Buddhist holy days...”

However, grandchild-rearing reflects cohabitation between the sandwich generations and their parents. But the total number of children of the sandwich generations has a negative relationship because the sandwich generations who have many children devote their time for rearing their children. Therefore time transfer for their parents is reduced. Moreover, they need time transfer from their parents to look after their children.

Apart from parents characteristics factor, the sandwich generation characteristics variables which statistically significantly influence on parents

emotional caregiving, are education, number of family members, number of children, and living arrangement factor: non-co-residence.

Generally, females are the ones who perform caregiving tasks, but for emotional care to parents, sons are more in charge of this particular care aspect than anyone else or any other care task. Sons prefer to give care that is not close-up care giving, for example care of physical needs. Nowadays, trends towards males being care providers is increasing because, for example, sons are the preferred child gender for married couples and women seem to be increasingly, and more than previously, entering the active workforce. In the context of Hong Kong and Chinese culture, adult sons display an active participation in the actual care provision for their parents, especially in financial and emotional support. Their input amounts to not much less than their female sibling counterparts (Kwoh, 2006). From the above it becomes clear that emotional caregiving is not only a burden for women but also for men, so the gender (female) variable does not have a significant relationship to emotional care giving, compared to, for example, physical related caregiving.

It is interesting that the education level variable has a positive impact on the dependent variable for both fathers and mothers in every model, and the number of family members has a statistically significant positive influence on the dependent variable for mothers in every model, with the parents' age and grandchild-rearing variable having positive impact on the dependent variable for both fathers and mothers in model 2 to model 4.

This result is consistent with Hogan et al,(1993); Lawton et al,(1994) who state that adult children and parents, who are in middle class occupations, are more highly to be educated and also have a higher income and are thus more likely to be involved in the exchange of emotional and instrumental support than their working class peers. It may be, firstly, that the sandwich generations who have higher education, coreside more with their parents than those who have a lower education (details in appendix B table B8). Consequently, they have more chance to give care to parents. This is reflected in the non-co-residence variable having a statistically significant - but negative - relationship. Secondly, the sandwich generations who have a higher education, have higher mean scores of all accompanied transportation than those who have a lower education (details in appendix B table B6). Therefore

education levels are one variable that may typically shape parent care (Marcoen, 2005). This result differs from Dilworth-Anderson et. al.,(2005) who found that education levels were inversely related to cultural justifications for caregiving. It is noticeable that the non-co-residence variable is statistically significant only in model 4 (father) and model 2 (mother), even if the co-residence or non-co-residence should determine the frequency of accompanied transportation for parents. However, emotional caregiving also includes the frequency of conversation with parents, with distance being no obstacle. The sandwich generations can contact their parents by telephone.

It is noticeable that in a family unit consisting of siblings, nieces or nephews, daughters or sons-in-law, they have a chance to share care giving to the elderly, therefore the total number of family members is positively related.

Table 5.3 Hierarchical Regression Analysis to Study the Determinants of Father Emotional Caregiving of the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	12.463	22.039	25.795	26.179
Sandwich Generation				
SEX	.001	-.022	-.020	-.016
AGE	-.032	.097	.094	.103
MARRIAGE	-.003	-.035	-.023	-.021
EDUCATION	.317***	.188**	.184**	.185**
TOTAL INCOME	-.059	-.032	-.031	-.026
TOTAL CHILDREN	-.066*	-.047	-.053*	-.050*
FAMILY MEMBER	.284***	.197**	.151	.150
PARENTS				
AGE		-.201**	-.205*	-.227**
HEALTH		-.001	-.010	-.006
GRANDCHILD- REARING		.291***	.277***	.291***
COUNSELING		.108	.100	.094
FINANCIAL		.046	.060	.054
Non-co-residence			-.076*	-.097*
SIBLING				
NUMBER OF SIB				.042
EMOTIONAL				.049
R²	.211	.375	.377	.381
F-test	7.778***	9.886***	9.186***	8.002***
R² Change		.163	.002	.004
F-test		10.334 ***	.862	.566

Note: * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

Table 5.4 Hierarchical Regression Analysis to Study the Determinants of Mother Emotional Caregiving of the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	11.607	34.349	36.456	38.409
Sandwich Generation				
SEX	-.056	-.038	-.039	-.050
AGE	-.020	.199**	.196**	.215**
MARRIAGE	-.023	-.010	-.043	-.055
EDUCATION	.300***	.282***	.281***	.038***
TOTAL INCOME	-.059	.019	.020	.024
TOTAL CHILDREN	-.077	-.010	-.012	-.004
FAMILY MEMBER	.324***	.280***	.258***	.253***
PARENTS				
AGE		-.407***	-.413***	-.454***
HEALTH		-.080	-.081	-.083
GRANDCHILD-REARING		.194**	.176**	.175*
COUNSELING		-.020	-.021	-.017
FINANCIAL		.073	.080	.078
Non-co-residence			-.042*	-.029
SIBLING				
NUMBER OF SIB				.072
EMOTION				-.073
<hr/>				
R²	.238	.371	.371	.379
F-test	11.667***	12.557***	11.583***	10.274***
R² Change		.163	.003	.004
F-test		10.751***	.306	1.482

Note: * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

5.3 Factors influencing Financial Support to Parents

Tables 5.5 and 5.6 show the results that the sandwich generation characteristics factor can explain 42.7% and 34.7% of the variation in the dependent variable (financial support) to their father and mother respectively. Both father's and mother's model, has the statistical significance level at .001 ($F=16.796$, $F=16.544$ respectively). The sandwich generation characteristics factor influencing the dependent variable with a positive influence is income, but when considering variables influencing caregiving to mothers, it is also found that the sandwich generations' age variable has statistical a positive influence on dependent variable.

When the parents factor is included into model 2, R^2 increases from .427 to .526 (father's model) and .347 to .419 (mother's model). The amount of increase is statistically significance at level .001 ($F=11.945$, $F=10.859$ respectively). This result show that parents factor is important in determining financial support as parents physical care and emotional care.

In this model, it is found in father's model that the independent variable with a statistical significance, arranged in order base on their Beta values namely, total income, fathers' financial support, fathers' grandchild-rearing, fathers' pension but the last two variables have negative relationship.

When considering variables having an influence on financial support to mother, the dependent variable with a statistical significance are arranged in order of the Beta coefficients: total income, mother's age, grandchild-rearing, mother's pension, number of children. The last two variables have a negative relationship. It is worth noting that income and grandchild-rearing variables carry statistical positive significance for both father and mother.

According to model 3, living arrangement factor is added into the analysis. It is found that the independent variables can accounted for 52.7% and 42.1% of the variation in financial support for father and mother respectively but do not significance level in this model. R^2 only increases from .526 to .527 (father's model) and .419 to .421 (mother's model). The non-coresidence variable is not statistically significant for either father or mother. The variables having statistical significance in model 2 remain unchanged in this model for mother and father except education

which has a statistical significance for financial support to mothers. It is noticeable that the living arrangement factor does not influence the dependent variable for both fathers and mothers even trying to control others factors.

In the model 4, when sibling factor is included into model 4, it is found that all independent variables can explain the variation of financial support being equal to 53.4% for fathers and 43.1% for mother but no significance level in this model. R^2 only increases from .527 to .534 (father's model) and .421 to .431 (mother's model). When considering the result of father caregiving, the variables of the sandwich characteristics factor and parents characteristics factor - which influence the dependent variable in model 2 and model 3 - remain unchanged, but the father's health variable and mother's health have statistical significance on the dependent variable in this model and have a positive influence.

The sibling factor does not influence the dependent variable for both father and mother even trying to control others factors.

It is noticeable that the total income variable has a positive influence on the dependent variable for both father and mother in every models and parent's grand child-rearing variable has a positive influence on the dependent for both father and mother in model 2 to model 4.

Overall, it is found that the variables which have an influence on financial support are: total family income, number of children, fathers' pension, regular income of mother, mothers' age, assistance from parent; financial support, and grandchild-rearing. Certainly, the more income they earn the more they have the ability to support parents with money, including the amount of money or the regularity of financial support, so all of this is the reason why the total income constitutes a variable influence on the financial support in all steps of the Hierarchical Multiple Regression Analysis.

Apart from the statistical results, it is found that information from interviews can also enrich the statistical outcomes:

Some of the sandwich generations provide financial support to parents because they do not have the opportunity or sufficient time to take care of the parents in any other way or form of care giving. They therefore try to compensate this deficiency in order to still express their gratitude and act as responsible offspring.

The lowest income bracket within the sandwich generation (less than 10,000 baht/month) provided the following reasoning:

“... My income is nearly not enough for my family so I can't give money to my parent regularly. I only give money to them for the New Year or Songkran festivals, but normally the elderly residing upcountry do not have a lot of expenses to pay unless they are seriously ill...”

Support from parents (finance and grandchild-rearing) (child care) has a positive influence, reflecting intergenerational exchange and showing that adult and parental supporting is not unidirectional but rather follows an exchange pattern between the two. It became clear from interviews that one of the most important reasons for the provision of care and co-residential arrangements with parents is that the grandparent(s) are sought after for the provision of child care for grandchildren. Intergenerational supporting, for example through money, is an exchange motive where people are more likely to transfer money and transfer more to other people when they received time help from others (Lillard and Willis, 1997). This behavior can also be explained by double-sided altruism (Stack and Falk, 1998; Slone, 2009).

The parents' pension is negatively related to the parents financial support because it shows that parents have their own income. It is noticeable that the mother's age has a positive influence, it is implied that the elderly parents' health worsen according to their age and need medical expenses (although the mothers' health variable is not an influence on the dependent variable). This corresponds with research by Kobayashi (2000) who studied elderly parent caregiving in Japanese-Canadian families. He found that parents' health is an important factor for adult children when giving care and assisting with financial support for their parents.

Living arrangement factor, non-co-residence or co-residence, does not have impact on the financial support to parents. Although in chapter 4 tables 4.7 and 4.8 show that the majority of the sandwich generations, who coreside with parents, give more money to parents than those who non-coreside but whether co-residing or non-co-residing, they still give money to their parents. Moreover, while financial support

to parents is not related to co-residence, inversely, it also helps to reduce the dependency on co-residence, as Westly (1998) found: increasing financial support to elderly parents in Taiwan may be a partial substitute for declining co-residential arrangements. Therefore, coresidence does not have an influence on financial support, like physical or emotional caregiving. The number of siblings and siblings assisting with money to parents do not have an influence, although interviewing found that the amount of money given to parents depends on their income and the income amongst siblings. Besides, some parents have several children but only few of the children assist with money. If parents receive money from one or two children, the remainder of the children will not provide money regularly because they think parents have enough money.

The opportunity cost of time is greater for high-income children (Cox, 1987). The frequency of such transfer will be inversely related to children's income but the amount of the transfer will be positively related to children's income, if the demand for attention is price inflexible. In an intergenerational context, children may use financial resource to free themselves from co-residing with parents or other time-intensive caregiving (Hermalin et al., 1990). Siblings with more resources may induce less well-off sibling to accept a trade-off of money for time by housing parents. In other words, it may be more efficient for high-income siblings with relatively high-priced time to specialize in market activities and to transfer money, while lower-income siblings provide services and housing for the parents (Lee et al., 1994, p1013). But from this study's results, the sandwich generation who coreside with parents, still remain the primary financial caregiver to parents. One of the sandwich generation who co-resides with parents, discloses her attitude toward financial support to parents among siblings as follows

“...My parents live with me so I am the person who almost pays all for their expenses. My sister and brother send money for parents sometimes but overall I pay more and am responsible for all care giving. It is unfair but I am proud to give care to them. But amongst the siblings those who give less care to parents should pay more for more of the parents' expenses...”

“... since my mother died last year, I would like my father live to with me but when he temporarily lives with me, he complains about everything and makes my wife and my children upset. So, living apart is the best way. However, I visit him every month and pay insurance fees for him every year, even though he is richer than me, but I want to pay something for him...”

In conclusion, there are 3 factors significantly related to the financial support given to parents: first, economic condition of sandwich generations, second, the economic situation or status of the elderly parents, and, third, intergenerational support.

Table 5.5 Hierarchical Multiple Regression Analysis for Factors which have an Influence on Financial Support for the Father by the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	-944.586	-799.538	-1178.218	-1006.265
Sandwich Generation				
SEX	-.063	-.033	-.034	-.034
AGE	.074	.052	.054	.035
MARRIAGE	-.009	.026	.016	.009
EDUCATION	.046	.078	.078	.083
TOTAL INCOME	.593***	.596***	.594***	.592***
TOTAL CHILDREN	-.108	-.068	-.059	-.054
PARENTS				
AGE		-.012	-.012	.001
HEALTH		-.094	-.092	-.096
WORKING		-.016	.012	.015
PENSION		-.239***	-.231**	-.235***
GRANDCHILD- REARING		.157*	.159*	.156
COUNSELING		-.108	.100	-.092
FINANCIAL		.212**	.208**	.197*
Non-co-residence			.061	.081
SIBLING				
NUMBER OF SIB				.011
FINANCIAL				-.087
R²	.427	.526	.527	.534
F-test	16.796***	11.945***	11.145***	11.145***
R² Change		.099	.002	.007
F-test		4.495 ***	.499	1.068

Note: * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

Table 5.6 Hierarchical Multiple Regression Analysis for Factors which have an Influence on Financial Support for the Mother by the Sandwich Generation

VARIABLES	Model 1	Model 2	Model 3	Model 4
	Beta	Beta	Beta	Beta
Constant	-2312.596	-5521.798	-6143.110	-5839.963
Sandwich Generation				
SEX	-.010	.001	.005	.001
AGE	.147*	.006	.006	.015
MARRIAGE	.052	.097	.059	.076
EDUCATION	.140*	.127	.079*	.138
TOTAL INCOME	.448***	.448***	.446***	.449***
TOTAL CHILDREN	-.179	-.210**	-.205**	-.202**
FAMILY MEMBER	.075	.017	.059	.059
PARENT				
AGE		.240*	.253**	.223*
HEALTH		.021**	.021	.021**
WORK		.075	.076	.084
PENSION		-.136*	-.127*	-.128*
GRANDCHILD- REARING		.136	.163*	.165*
COUNSELING		.089	.092	.098
FINANCIAL		.005	-.003	-.011
Non-co-residence			.075	.083
SIBLING				
NUMBER OF SIB				.081
FINANCIAL				-.079
R²	.347	.419	.421	.431
F-test	16.544***	10.859***	10.175***	9.253***
R² Change		.072	.002	.010
F-test		.372***	.768	1.773

Note: * $P \leq 0.05$ ** $P \leq 0.01$ *** $P \leq .001$

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

The purpose of this chapter is to summarize the study and to formulate recommendations for future research on the topic of “Parental caregiving among the sandwich generation in Bangkok Metropolitan Area”, coupled with suggestions on policy recommendations.

The data was collected from a survey of 196 males and 204 females belonging to the sandwich generation, aged between 35 to 55 years. This sandwich generation represents the sandwich generation of all of Bangkok Metropolitan area through the process of stratified random sampling from district groups, districts, sub-districts, main roads and “soi” (side streets) respectively. This research divided the investigation of parents caregiving among the sandwich generation into three types as follows: physical caregiving, emotional caregiving and financial support.

From a review of relevant literature it could be discerned that the three types of parents care provision mentioned above rely on four factors which are:

1) The sandwich generation characteristics factor, consisting of 7 variables: (a) gender (b) age (c) current marital status (d) education level (e) total family income (f) total number of children, and (g) total number of family members

2) Parents factor, consisting of 4 variables: (a) age (b) health (c) source of parental income, and (d) parents’ assistance.

3) Living arrangements factor, consisting of 2 variables: (a) non-co-residence, and (b) co-residence.

4) Sibling factor, consisting of 4 variables (a) number of living siblings (b) physical caregiving (c) emotional caregiving, and (d) financial support.

The dependent variables used in the analysis are scores of three types of parents caregiving of the sandwich generation: physical caregiving, emotional caregiving, and financial support. The concepts and theories from the review of literature were used to determine the conceptual framework for the research.

From the research conceptual framework, the process of data collection concentrated on the size of the samples used as representative for the study. Stratified random sampling is employed to select the samples for the study from the population.

To analyze the collected data, descriptive statistics were used to describe the characteristics of the sandwich generation according to the characteristics of dependent and independent variables. The analysis of data is presented as frequency distribution, percentage, mean (\bar{x}) and standard deviation (S.D.) For the determination of factors as determinants of parent caregiving among the sandwich generation, the statistics suitable for qualification and appropriateness between dependent and independent variables in bivariate analysis are used in cross-tabulation to study the association between dependent and independent variables. With regard to multivariate analysis to determine the factors as determinants of patterns of parental caregiving among the sandwich generation in the three types mentioned above, the statistics utilized for analyzing the data is hierarchical multiple regression analysis.

6.1 Conclusions

6.1.1 Background Characteristics

It is found that the average age of the sandwich generation is 44.05 years. Regarding marital status, it is found that over three quarters are married, while the rest are divorced, separated and/or widowed. The highest percentage of the sandwich generation (49.3%) graduated with a bachelor's degree or higher, followed by a diploma degree (15.3%). As to type of occupation, 33.3% are civil servants, followed by private sector employees (26.5%), with the rest being business owners - either with or without subordinate(s) (employees) - at relatively close number of 15.0% and 14.3% respectively. The research also finds that the sandwich generation has an average income of 22,963.24 baht per month. Apart from their own income, the family's average income per month of the generation is 56,207.35 baht. When comparing the financial status between the sandwich generation and their sibling(s), it is found that 55.7% of them have a relatively similar financial status to their sibling(s), while 27.8% of them have a better financial status.

When examining the family background, it is found that among the sandwich generation there are 321 persons with sibling(s) (80.3%), whereas 19.7% are the only child in the family. When studying the birth order it is found that 39.8% of them are the eldest and 28.9% are the second child within the family. The average number of siblings of the sandwich generation is 2.69 persons, and their own children's average number is 1.79 persons, with 48.7% of them having two children and 37.8% having only one child. 28.0% of the sandwich generation families have 4 members and 24.0% of them have 5 members and 22.3% have 3 members. The average number of family members is 4.62 persons, and 46.2% of these families consist of 3 generations.

To study the parents' characteristics, it is found that fathers and mothers of the sandwich generation are within a relatively close average age range, namely 69.7 and 69.0 years old respectively. 48.3 % of the sandwich generation's fathers finished their study in primary school, while their mothers having completed this level come in at a higher percentage rate of 68.3%. Only 15.4% of the sandwich generation's fathers graduated with a bachelor's degree or higher, whereas the percentage of mothers having completed this level of study is only 12.5%. General health conditions of most of the sandwich generation's parents are at moderate level or better.

The study of living arrangements found that 45.3% of the sandwich generation lives with their parents and 54.7% live separately. The research finds that among the sandwich generation who co-reside with parents, the parents co-reside with the male sandwich generation to a larger extent (54.5%) than living with female sandwich generation members (45.5%). When studying their income, it is found that nearly all income groups coreside with parents in the parental home to a larger degree than the number of the sandwich generation whose parents coreside in the sandwich generation's house, with the exception being those with income between 20,001 – 30,000 baht per month. Furthermore, the research also found that with 78.4% of the sandwich generation who have two children or more, the parents moved in to live with them. This percentage increases according to the number of the sandwich generation's children.

The study of parental caregivers find that living arrangements determine who the parents' caregivers are. Whether or not the sandwich generation is an only child or has siblings, children who are living with parents are the parents' primary caregivers.

The ones living separately from parents are the parents' secondary caregivers due to the living arrangement factor because the ones living close by have naturally more chance to perform such care than the ones living far away. In addition, even though financial support is the major aspect of caregiving in which the most children participated in (when compared to the other two types), the ones living with the parents provided – nonetheless - more financial support to parents than the ones living separately

In addition, when studying the single child sandwich generation, it is found that this sandwich generation group is their parents' primary caregiver, either living with the parents or living separately. The parents have, in any case, to take care of themselves to a larger degree than the ones with many children because apart from the only child sandwich generation, there are no other people available to perform as primary caregivers, except for conversation in which the parents living separately from the sandwich generation have neighbors as conversation companions (57.7%).

6.1.2 Parental Caregiving

The study on all 3 types of parental caregiving (physical care, emotional care and financial support) found the mean and frequency distribution of each caregiving type as follows:

Physical care: this type of caregiving is divided into 3 categories, namely, personal care, food provision and housework. The study finds that the mean (\bar{x}) of all three categories of parent caregiving of the sandwich generation living separately from parents is less than that of the sandwich generation group living with parents. When studying the latter group, the mean of food provision for parents of both male and female sandwich generation is higher than that of personal care and housework. When comparing genders, it is found that the female sandwich generation provides more parent caregiving in every physical care than the male sandwich generation does.

Emotional caregiving: this research has divided emotional caregiving into 2 categories: escort and conversation with parents. For the group living separately from parents, both male and female sandwich generation have a very close mean (\bar{x}) in this type of caregiving, both escorting and conversation. But the group living separately

from parents provide this care less than that of the co-residence-with-parents group in both subcategories. When studying the co-residence-with-parents group, it is found that male and female sandwich generation have similar degree of assistance their parents in both subcategories of emotional care. Among the group living separately from parents, it is found that more than half of males and almost half of females had never taken their fathers or mothers to see a doctor, to a temple, to visit father's or mother's friends or to go shopping. After that when studying details, the frequency distribution of escort for parents by either male or female sandwich generation is once a month. But the percentage is largely different; the female group who has never taken their fathers to travel is 42.5%, followed by once a month 21.3%. Such characteristics are also found among the male sandwich generation. Whereas in the group living with parents, it is found that they generally take their parents to travel, to see a doctor, or to go shopping once a month with the exception of taking parents to visit parents' friends which is done less frequently; more than half of the female sandwich generation (64.9%) has never taken their father to visit his friends, followed by once a month at only 24.6%.

Financial support: this study divided the financial support to parents of the sandwich generation into 2 categories: monthly support and occasional support. The study of the sandwich generation living separately from their parents find that 47.0% of the male sandwich generation gives money to the father and 49.5% gives it to the mother every month. But the females of this group occasionally give financial support to fathers and mothers (53.8% and 54.4% respectively). With the group living with the parents it is found that most of the males in this group, 44.2%, give money to the father occasionally and 38.5% give money every month, but 50.0% of them give money to the mother every month, in contrast to the females of this group, 40.4% of them give money to the father and 61.7% give money to the mother every month. On the whole, the sandwich generation either living with parents or living separately gives more monthly financial support to the mother than to the father. Regarding the ones who never give financial support to parents, it is found that they are the ones living with the parents more than the ones living separately. 21.1% of females living with the parents never give money to mothers compared to only 6.3% of those living separately. However, it is found that only 7.1% of male sandwich generation living

with parents never give money to parents compared to a higher percentage at 11.1% of males living separately who never give money to parents. When comparing the income sources of the parents of the sandwich generation who earned less than 10,000 baht per month, it is found that these parents' income is derived from their own work with the highest percentage when compared to the parents of other income group. Nonetheless, this sandwich generation's occasional financial support is still the main income source of the parents either living with the sandwich generation or living separately. The percentage of parents who still had to work to earn their living, however, decreases among the parents of the sandwich generation group who have a better income, and with the better income, the children in this group could give more financial support and also do so more regularly.

The study of intergenerational support found that the sandwich generation is not one-sided caregiving to parents but the parents also provide to the sandwich generation. This research divided the parental assistance into 3 categories: grandchild-rearing (child care), providing counsel and financial aid. In the co-resident-with-parents group, it is found that the sandwich generation who co-resides with parents in the parents' house gives more money to parents than the sandwich generation which co-resides with parents in their own house. The parents who provide residence to the sandwich generation support financial, grandchild-rearing and counseling to the sandwich generation more than the parents who reside in the sandwich generation's home. When studying the amount of money, it is found that almost half of the sandwich generation either living with the parents in the parental home or living with the sandwich generation in the sandwich generation's house, give money to their parents of about 1-5% of their income. 40.5% of the sandwich generation living with parents in parents' house give 1-5% of their income to the father and 40.3% give it to the mothers. But when studying details it is found that the sandwich generation living with parents in the parental house gives more financial support to parents than the sandwich generation whose parents live with them in their house. They give money to father to the tune of 11-15% of their income (16.2% of them), while the sandwich generation whose parents live with sandwich generation in sandwich generation's house give to their father 11-15% of income (representing only 4.6%). Furthermore, the sandwich generation who co-resides with parents received more assistance from

parents than the ones living separately. Therefore, it shows that co-residence is a factor that enables the sandwich generation to receive more assistance from parents compared to the ones living away. This research finds the direction of support between the sandwich generation that is reciprocal direction: upward flow (children support parents) and downward flow (parents support to children). It is remarkable that downward flow support from parents affects parental caregiving of the sandwich generation although they declare that gratitude is the most important reason for their parents caregiving.

6.1.3 Factors Influencing Parental Caregiving of the Sandwich Generation in Bangkok Metropolitan Area

The analysis of factors influencing parental caregiving of the sandwich generation is conducted by means of Hierarchical Multiple Regression Analysis.

When examining the factors influencing physical parents caregiving, the research found that all fifteen independent variables used in the model can explain the variance of physical caregiving for father by 40.3 per cent ($R^2 = .403$) and by 35.2 per cent ($R^2 = .352$) for mother. Only eight independent variables for father and seven independent variables for mother have statistical significance influencing physical parental caregiving. The variables having statistical significance for physical caregiving for father and mother are remarkably similar.

As a result of the finding the variables of demographic factor positively related to physical caregiving for father are sex (female), and number of family members. The negatively related variables are marriage, number of children, and total family income. For mothers the variables that are positively related are sex (female), number of family members, and the negatively related variables are marriage and total number of children. This finding shows that the female is the primary caregiver of physical care because, according to tradition, women in every society are in charge of the care and well-being of family members, for example food preparation or taking care of sick family members. Although women nowadays work more outside the home than in the past, they still have no fewer responsibilities than men do. Nowadays, they still carry on their 'dual work', meaning both the task of working outside and taking care of the well-being of family members which is routine care. Nevertheless, women

usually view this kind of care as part of the female role rather than viewing it as a task of caregiving.

The variables of parents factor that are positively related to physical parent care, for father, are grandchild-rearing, counsel but the variable 'counsel' is only one variable that is positively related to physical mother caregiving. There is only one variable, 'mother's health', that is negatively related. The study shows that there is mutual reliance between the sandwich generation and elderly parents. Grandchild-rearing is generally found in oriental societies. It not only builds the warmth and family bond but also makes the grandparents sense their importance and meaning for the family even if there are nurseries or it is possible to hire someone to look after the grandchildren, yet the sandwich generation still regards the grandparents as the most reliable person to take care of their children.

The living arrangement factor (the reference group is non-co-residence) is negatively related for both father and mother. Physical care needs the closeness of co-residence or living nearby between the caregiver and the care recipient. Therefore the co-resident adult child (residing with the parents) is more able to take care of them than the ones living separately. The parents living alone consequently have to take care of themselves except the well-to-do ones who are able to hire someone to take care of themselves. However the parents' health deteriorates according to their age which results in their incapacity to help themselves effectively as they did previously, so this will be a factor prompting the children to take care of their parents more closely.

Assistance from other siblings has no influence in physical caregiving because this type of care occurs in the course of daily living which involves coresidence or closeness; the parents in this case are then taken care of closely and constantly as a result. The child living with the parents is the primary caregiver while the non-co-resident siblings are only occasional assistants.

When examining the factors influencing emotional parent caregiving, the research finds that all fifteen independent variables used in models for analyzing emotional parent caregiving can explain the variance of emotional caregiving for father by 38.1 per cent ($R^2 = .381$) and by 37.9 per cent ($R^2 = .379$) for the mother.

There are five independent variables which carry statistical significance influencing emotional parents care giving.

The study finds that there is only one of the variables of the demographic factor, namely educational level, which is positively related to emotional caregiving for fathers and three variables that are positively related to emotional caregiving for mothers, these being age, education level, and number of family members. This research finds that education is the most important variable for the sandwich generation in providing parental emotional caregiving. It is probably because a high educational attainment is likely to enable a better understanding of elderly care giving. Therefore they see the importance of parent caregiving, both in physical and emotional aspects. Furthermore, it also implies that the highly educated people usually have sufficient income to 'pay' for emotional caregiving such as taking the parents to visit different places or to go shopping as well as seeing a doctor for medical care. Moreover, it is also found that with the increase in age the sandwich generation provides increasing emotional caregiving to their mothers. That is because the aging children normally have a more secure profession and status than before so they can provide their parents with the emotional care needed. In addition, as the sandwich generation members are aging, so are their parents who are in need of more care, for example to go and see the doctor or to have someone as conversational companion because when getting older, the parents' social contact decreases, probably because after their retirement their living friends decrease in number as well. Also, travel cannot be easily done by on their own anymore like before, they are then becoming more dependent on their children.

For the parents factor, the variable that is positively related to emotional care giving for both father and mother is grandchild-rearing (child care). The variable that is negatively related is the father's age and the mother's age. Grandchild-rearing is still an important variable that makes elderly parents in turn taken care of by the sandwich generation. Because apart from being intergenerational support, grandchild-rearing also enables the elderly parents to participate in family activities or to have interactions such as conversations, going out to eat or visiting places together with other members of the family. However, because of getting progressively older this

becomes an obstacle in making long distance travel or going shopping, which results in the aging parents' undertaking fewer activities outside the home.

The living arrangement factor: non-co-residence is negatively related for both father and mother. In the study on the sandwich generation's residence, it is found that people with a higher education are more likely to co-reside with their parents, which in turn enables them to provide more care for their parents than people with a lower education. Support from other siblings has no influence on emotional parental care giving because the co-resident adult child with parents is the primary caregiver as this caregiving type is similar to physical caregiving that makes co-residence the main factor for this care. The separately living siblings from the parents are only secondary caregivers for the provision of additional assistance.

When examining the factors influencing financial support to parents, the research finds that all seventeen independent variables used in models for analyzing financial support to parents can explain the variance of the financial support to fathers by 53.4 per cent ($R^2 .534$) and to mothers by 43.1 per cent ($R^2 .431$). There are only three independent variables for fathers and six independent variables for mothers which have a statistical significance influence on the financial support to parents.

The only one variable of the sandwich generation characteristics factor that is positively related to the financial support to father and mother is the total family income. This research finds that the higher-income children provide more financial support to their parents and also do so more constantly when compared to lower-income persons. This is the highest value variable when compared to other statistically significant variables. So in the low-income group, the parents get less financial support as a consequence. They usually have a low education attainment and are materially poor parents whose main income comes from working to earning their living along with occasional financial support, likely a small sum of money from the sandwich generation. Thus the elderly parents of this group are vulnerable, particularly the ones living alone.

Apart from the higher earnings that enable the higher-income children to provide their parents with more caregiving, there are also other reasons. The high-income children are more likely to not provide other types of parental caregiving by themselves, physical caregiving because such care needs time and frequency, which

the high-income people lack because their jobs result in higher working time cost than the time cost for providing care for their parents. Therefore, they compensate the lacking time allocation for their parents through the provision of financial support. Opinions gathered from sandwich generation group interviews show that children living separately from parents and without closely participating in financial expenses or others are mostly supposed to give financial support to their parents.

For parents factor, the variable that is positively related to financial support to father is grandchild-rearing and the negatively related variable is the father's pension. The variables that are positively related to financial support to mother are mother's age, mother's health, grand child-rearing but the 'mother's pension' variables is negatively related.

Assistance that the parents give to the sandwich generation, especially grandchild-rearing, is still the main factor making the parents obtain support from their children as well as physical caregiving and emotional caregiving. Furthermore, financial support that the father gives to his children also enables him to get financial support from his children. But in the case of parents with a pension, the children give them less financial support because they think that their parents already have a sufficient income to support themselves. Ageing mothers receive more financial support from their children, whereas the fathers' age has no influence on getting more financial support because in nearly all societies, mothers are likely to get more financial support from children. Healthy parents receive less financial support from children than ailing parents do.

Living arrangement factor, co-residence or non-co-residence, does not influence financial support for parents, which is in contrast to the first two types of parental caregiving. This is because the children living away from parents generally still send their parents some money even though the sum of money varies depending on each child's ability to earn money. Financial support is assistance without limit or conditions subjected to dwelling areas or each person's time availability for this kind of care.

However, although financial support to parents is the only caregiving in which the siblings take part the most compared to other types of caregiving, support from other siblings has no influence among the children's financial support to parents. Because the most important reason for parent caregiving is gratitude, the sandwich

generation consequently performs their duty to express this virtue toward their parents by giving assistance even though it is already provided by other siblings. Therefore, financial support to parents sometimes does not arise from the parents' need but rather from the sandwich generation's expression of gratitude toward their parents, especially from those who are unable to closely care for the parents by themselves.

The number of children of the sandwich generation is negatively related to financial support to mothers because the more children the more expenses, including financial savings management in preparation for their children's expenses in the future, so financial support to their parents in this case diminishes accordingly.

In summary, the sandwich generation's parental caregiving is a longstanding and continuous duty without financial compensation. It originates from the parent-child bond and is a responsibility of the children toward the parents. There are various factors related to parental caregiving, depending on the type of care, as already described above. The support the sandwich generation provides to the parents is not a unidirectional assistance because they, in turn, are also assisted by their parents. The caregiving and support between the sandwich generation and their parents is rather reciprocal than unidirectional. The parents who assist their children are also supported in turn by their children with caregiving. Moreover, the co-residence between the sandwich generation and the parents is an important factor enabling the parents to obtain care from their children, all of which is clearly in contrast to the parents living separately from the sandwich generation.

The sandwich generation members who are an only child of the family have to assume nearly all aspects of the primary caregiver's role which means bearing a heavier burden than the sandwich generation members who have sibling(s). In addition, their parents have to take care of themselves to a larger degree than parents with many children. In the future, families increasingly tend to have only a single child because married couples prefer having fewer children than before. However, among the sandwich generation members who have sibling(s), the parental care giving from brother(s) or sister(s) has no influence on all three types of care provision because physical caregiving and emotional caregiving involves a co-residential arrangement, and the primary caregiving adult child is the one living with the parents. The sandwich generation living separately from parents are only secondary

caregiver(s), while financial support to parents is an assistance that involves to a lesser extent the co-residence factor compared to the first two types of parental caregiving, and it does not require the availability of time so it is the type of care which the parents receive the most from all their children. Above all, even when there are other sibling(s), parental caregiving is everyone's responsibility according to what Thai society teaches and considers as the value of gratitude toward parents and which the children must display. This system of values is the most important reason for parental care provision by the Thai sandwich generation as found in this study.

6.2 Recommendations

From the study of patterns of parent caregiving of the sandwich generation in Bangkok Metropolitan area, many important issues can be identified. The suggestions and recommendations from this study are presented and separated into two parts 1) recommendation on policy and 2) recommendation for future research.

6.2.1 Recommendation on Policy

Elderly caregiving is a heavy and long-term task, so assistance from surrounding people as well as from governmental agencies can meaningfully help the caregivers perform their duties efficiently and prevent it from being an overbearing load or burden. The government therefore should maintain and enhance the strength and durability of the family and informal care-providing networks as they are the primary providers of long-term care.

Caregiving should not be regarded as merely an ageing issue, but is in fact a family issue and policy issue as well. It is essentially important that the state develops caregiver support policies, especially to the primary caregivers, to protect them from financial and emotional crisis often resulting from long-term caregiving, and also to enhance and strengthen family bonds. More governmental action is needed to support families responsible for elderly caregiving, because in doing so these families may get into severe stress, both physical and mental. Therefore, the government should – most importantly - adopt the caregiver support issue onto their policy agenda. Parent caregivers must be supported through measures such as the following:

1) The government should help the elderly in the informal and unskilled labor force. This study has found that, among the lowest income sandwich generation, the major source of these elderly parents' income is the income from their own labor. At present state assistance does not yet cover all these elderly persons as it is found that these people who still work hard and have to rely on their children's assistance, make up a relatively high percentage of the population when compared to the samples with a higher income. Apart from income from labor, another income source is the money from their children which is not a lot because the sandwich generation from the low income group usually also has a low education attainment, and is also unskilled or semi-skilled labor. So this elderly group is poor and vulnerable, and has to do physical work right through to old age. Therefore social welfare should provide funds to help the elderly poor both financially and through welfare, establishing the old-age pension system covering all the elderly, and promoting the employment of the elderly in non-physically punishing jobs (such as enhancing their opportunities to work in community organizations). On the other hand the government should also encourage and support the poor and the disadvantaged in their own ability to help themselves and be self-reliant.

2) Now, families prefer to have fewer children and the average marital age is higher than in the past. The study result shows that in the single-child families parental caregiving falls heavily on the single child of the family, and the parents have to take care of themselves more than those having several children. Therefore, the government should have long-term policies to deal with the increasing number of this type of family.

3) Support in controlling the rising cost of care by providing financial incentives and compensation, including direct payments and tax incentives. Studies show that the sandwich generation, who are in co-residence with parents, are often primary caregivers and usually responsible for their parents' expenses, particularly for medical treatment. Even though some of them have welfare provided by their workplace which also covers their parents (some parents have their own welfare as well) or some of the sandwich generation members arrange health insurance for their parents, all of these may not cover all aspects of health care such as dental treatment, annual medical checks etc. These medical treatments or the health care not covered by

insurance, should be subject to tax relief, and in case of people without health insurance, their medical treatment in private hospitals should also be subject or linked to tax relief in order to alleviate the sandwich generation's burden. Moreover, a fund to lend money for parental medical treatment should be established as another alternative for people responsible for these expenses because the cost of care is an economic burden for most families.

4) The government should enhance the accurate knowledge about parent care giving, including elderly caregiving via different media such as opening a web site with the objective of not only providing information but also being a center for exchanging opinions, knowledge, including problems and obstacles encountered in parents caregiving by carers, so that they can share and obtain more information from people with more knowledge and experience.

5) The government should enhance the elderly parents to earn their livelihood without relying too much on their children in order to have stability and maintain the relationship between the sandwich generation and the elderly parents. The government should have a welfare policy emphasizing income security and health protection so that the elderly parents can still have their own autonomy and be in stable relationships with their children. Moreover, by means of state investment, the government could establish sufficient economic, health and social support conditions leading to independent livelihoods.

6.2.2 Recommendation for Future Research

1) This research studies the pattern of caregiving including factors influencing parent caregiving. Therefore, in order to have more detailed perspectives, there should be further studies of roles of other members of the family such as daughters-in-law, sons-in-law etc. Furthermore, there should also be studies on the parent's attitudes and opinions about their perceptions of the roles of the children in the family.

2) The study result shows that parents living separately from their children are taken care of to a lesser degree than the ones living together with their children. The separate residence arrangement is the first vital problem obstructing the children from looking after their parents as much as they want. So there should be

studies on the children providing such long-distance caregiving in order to study factors concerning direct care to the parents, such as siblings, parental health status, welfare status, as well as assistance needed to enable the best quality of parent caregiving.

3) This research studied selective demographic variables of the parent: age, health, status, source of income. However, the study also found other interesting issues apart from the ones mentioned above: the parents' marital status plays a part in the sandwich generation's parental caregiving as well. The sandwich generation's caregiving to elderly parents who are divorced or remarried is subject to their parent-child relationship and also the relevant new marriage partner. There should therefore be qualitative studies in order to study in depth the caregiving for divorced parents whose numbers tend to rise continuously, as well as the elderly living separately, the number of whom also being on the increase.

4) This study used a qualitative approach to collect data showing the analysis pattern, along with a quantitative technique in order to have a more complete research study. The research in the future may use mainly qualitative techniques for data collection and data analysis. The qualitative techniques for in-depth interviews will help to obtain more details such as financial problems resulting from parent caregiving, relationships within families, negative effects from parent caregiving etc.

5) This research examined parental caregiving in Bangkok Metropolitan area. In future there should be studies on the sandwich generation's parent caregiving in rural areas in order to have information about patterns and factors concerning parent caregiving and determine either similarities or differences to Bangkok's sandwich generational parental caregiving. Moreover, there should be studies on parent caregiving from the parents' perspectives themselves because the rapid urbanization and the increasing number of young adult migration to urban areas means that their parents - who remain at home and getting old in rural areas - have to face the living conditions by themselves without either their children's direct support nor proper access to assistance. The study outcomes will publicize the problems and assistance needed for the parents living in those rural areas.

6) As a result of this study it is found that neighbors play important roles in caregiving for those parents living separately from their children, particularly

in rural areas. Consequently research in the future should study caregiving networks beyond the immediate members of the families, for example neighbors, local organizations etc. This will be useful for policy planning in order to promote and assist the parents living in rural areas and separate from their children.

7) From a review of relevant literature it is found that in the future the parent caregiving trend in developing countries will change according to the country's development. Examples are changes of the sandwich generation's parent caregiving in South Korea and in Japan, which begin to increasingly resemble western countries, i.e. parent caregiving is shifting away from a reliance on family towards more dependence on formal programs developed by each country. Therefore, there should be studies on factors leading to a trend shift in Thailand, both on a macro and a micro level, in order to find an appropriate approach to take care of the elderly in the future.

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APPENDICES

APPENDIX A

Questionnaire

Parental Caregiving Among the Sandwich Generation in Bangkok Metropolitan Area

The objectives of this study are to study parental care giving, structured and divided into 3 types: Physical care, emotional care and financial support. The outcome will be beneficial in developing projects for assisting families expecting to care for their elderly in the future. Your responses will not affect you directly and will be treated confidentially. Please assist in answering the questionnaire about you and your family factually and correctly. The author of this study would like to thank you for your kind co-operation in answering the questionnaire.

This questionnaire consists of 6 parts as follows

Part 1 General background

Part 2 Parental data

Part 3 Living arrangements

Part 4 Parental support

Part 5 Parental caregiving

Part 6 Sibling's care provision to parents and parents' primary caregiver being an only child

Part 1 General background

Instructions: Please tick ✓ in or fill in the blanks / complete the answer, whatever is applicable

1. Gender Male Female

2. Age.....years

3. Marital Status
 - Married Divorced
 - Separated Widowed
 - Others (please specify).....

4. The highest level of your education
 - Primary school High school Diploma
 - Bachelor's Degree Master Degree or higher
 - Others (please specify).....

5. Main occupation
 - Government / public sector employee Private company employee
 - Owner of business with subordinates
 - Owner business without subordinates
 - Laborer Unemployed
 - Others (please specify).....

6. Your incomebaht / month

7. Do you have siblings?
 - Yes No (If No, please go to question 11)

8. You are in order of children from a total number ofperson(s)

9. Number of male siblings person (s)

Number of female siblingsperson (s)

10. Number of living siblings person (s)

11. Please give the details about person(s) living with you

Type of Relationship	Age	Education	Work status	
			Have job specify income/month	No job
<input type="checkbox"/> spouse				
<input type="checkbox"/> father				
<input type="checkbox"/> mother				
<input type="checkbox"/> father – in – law				
<input type="checkbox"/> mother – in – law				
<input type="checkbox"/> older sister 1..... 2.....				
<input type="checkbox"/> younger sister 1..... 2.....				
<input type="checkbox"/> older brother 1..... 2.....				
<input type="checkbox"/> younger brother 1..... 2.....				
<input type="checkbox"/> Child age < 18 1. <input type="checkbox"/> male <input type="checkbox"/> female 2. <input type="checkbox"/> male <input type="checkbox"/> female 3. <input type="checkbox"/> male <input type="checkbox"/> female				

Type of Relationship	Age	Education	Work status	
			Have job specify income/month	No job
<input type="checkbox"/> Child age > 18 1. <input type="checkbox"/> male <input type="checkbox"/> female 2. <input type="checkbox"/> male <input type="checkbox"/> female 3. <input type="checkbox"/> male <input type="checkbox"/> female				
<input type="checkbox"/> Relative 1. <input type="checkbox"/> male <input type="checkbox"/> female 2. <input type="checkbox"/> male <input type="checkbox"/> female (please specify the relationship)				

Part 2 Parental Data

Instructions: Please tick ✓ in or fill in the blanks / complete the answer, whatever is applicable

1. Currently your:

- Father is still alive, aged years.
- Mother is still alive, aged years.
- Father died year (s) ago.
- Mother died year (s) ago.

2. The highest level of education

Father.....

Mother.....

3. Parental health status

Health	Very healthy	Healthy	Rather healthy	Moderate	Less than moderate	Rather fable	Feeble
Father							
Mother							

4. Please fill ✓ in Parent's source of income (more than one answer is permissible)

Source(s) of income	Father	mother
Working		
Pension		
Monthly from child		
Occasionally from child		
Others (Please specify)		

5. What are your important reasons for care giving to parents? (More than one answer is allowed)

- Gratitude
- Parents don't have their own income
- Parent's geriatric health problems
- Parents don't have other children to take care of them
- Parents don't have any confidence to live alone by themselves
- Parents don't have their own house
- Others reasons (please specify).....

Part 3 Living arrangements

Instructions: Please fill ✓ in or fill in the blanks provided

1. At present, you

<input type="checkbox"/> live with father and mother	<input type="checkbox"/> separate from both father and mother	<input type="checkbox"/> live with father	<input type="checkbox"/> live with mother
↓	↓	↓	↓
.....year(s)year(s)year(s)year(s)
	↓	↓	↓
	At present, parent lives with	At present, mother lives with	At present, father lives with

2. Do you have problems with your provision of care?

- Yes No (If No, please go to question 5)

3. If yes, what are your problems? (More than one answer is allowed)

- Increase in expenses
- Decrease in living / house space
- Conflict between parents and your spouse
- Conflict between parents and others family member(s)
- You don't have sufficient time due to child rearing
- You don't have sufficient time due to work commitments
- Your health problem
- Others reason (please specify).....

Part 4 Parental support

Instructions: Please fill in for each item which agrees most with your opinion

Type of support		Most	Almost	More than moderate	Moderate	Less than moderate	Less	Least
Grand child-rearing	Father							
	Mother							
Counseling	Father							
	Mother							
Financial	Father							
	Mother							

Part 5 Parental caregiving

Instructions: Please tick in or fill in the blanks provided

Considering the following types of care provision, how often do you apply each type to your parent(s)?

1. Physical care: such as bathing, dressing, toileting

	Every day	4-5 times /week	2-3 times / week	1 time /week	2-3 times / month	1 times /month	Others (specify)
Father							
Mother							

2. Meal provider

	Every day	4-5 times /week	2-3 times /week	1 time / week	2-3 times /month	1 time / month	Others (specify)
Father							
Mother							

3. Domestic work

	Every day	4-5 times /week	2-3 times / week	1 time /week	2-3 times / month	1 times /month	Others (specify)
Father							
Mother							

4. Take your parents to

Type of support	>1time /month	1 time /month	every 2-3 month	every 4-5 month	every 6-7 month	1 time / year	Rarely /never (specify)
Traveling	Father						
	Mother						
Visit doctor	Father						
	Mother						
To temple	Father						
	Mother						
Meeting	Father						
	Mother						
Shopping	Father						
	Mother						

5. Conversations with parents

Every day	4-5 times /week	2-3 times /week	1 time / week	2-3 times /month	1 time /month	Others (specify)
Father						
Mother						

6. Financial support to parents: How do you provide financial support to your parents?

Type of financial support	Father's expenses	Mother's expenses
Personal expenses	<input type="checkbox"/> monthlybaht / month <input type="checkbox"/> sometimestime / year Average.....baht /month <input type="checkbox"/> other please specify	<input type="checkbox"/> monthlybaht / month <input type="checkbox"/> sometimestime / year Average.....baht / month <input type="checkbox"/> other please specify
Medical expenses	<input type="checkbox"/> only you who provides this expensebaht/month <input type="checkbox"/> your welfare <input type="checkbox"/> father's own welfare <input type="checkbox"/> sibling's welfare <input type="checkbox"/> others (please specify)	<input type="checkbox"/> only you who provides this expense.....baht/month <input type="checkbox"/> your welfare <input type="checkbox"/> mother's own welfare <input type="checkbox"/> sibling's welfare <input type="checkbox"/> others (please specify)
Other expenses (please specify type)baht/monthbaht/month

Part 6 Sibling's care provision to parents

Instructions: Please fill ✓ in and fill in the blanks provided.

(Questions on this page are for respondents who have siblings. Respondents who are an only /single child please answer questions in section 6.2)

6.1 Amongst your siblings, who is the first order caregiver to parents?

1. Physical care, such as bathing, dressing, toileting

	Older	Younger	Older	Younger	No sibling
	Brother	Brother	Sister	Sister	help
Father					
Mother					

Please specify who is the primary caregiver.....
(It's not necessarily a sibling or relative)

2. Meal Provider

	Older	Younger	Older	Younger	No sibling
	Brother	Brother	Sister	Sister	help
Father					
Mother					

Please specify who is the primary caregiver.....
(It's not necessarily a sibling or relative)

3. Domestic work

	Older	Younger	Older	Younger	No sibling
	Brother	Brother	Sister	Sister	help
Father					
Mother					

Please specify who is the primary caregiver.....
(It's not necessarily a sibling or relative)

4. Take parents to

Older	Younger	Older	Younger	No sibling
Brother	Brother	Sister	Sister	help

Travel

Visit doctor

Temple

Meeting

Shopping

Please specify who is the primary caregiver.....
 (It's not necessarily a sibling or relative)

5 Conversation with parents

Older	Younger	Older	Younger	No sibling
Brother	Brother	Sister	Sister	help

Father

Mother

Please specify who is the primary caregiver.....
 (It's not necessary to be sibling, relatives)

6. Financial support

Older	Younger	Older	Younger	No sibling
Brother	Brother	Sister	Sister	help

Father

Mother

Please specify who is the primary caregiver.....
 (It's not necessarily a sibling or relative)

7. Your financial status, in comparison to your sibling

Richer Equal Poorer

6.2 Questions for respondents who are an only child

Please specify the primary caregiver, i.e. who provides the most care to your parents

Types of caregiving	Primary caregiver	
	Father	Mother
Bathing, Dressing, Toileting		
Meal provider		
Domestic work		
Traveling		
Visiting doctor		
Visiting temple		
Meeting		
Shopping		
Conversation		
Financial		

APPENDIX B

Descriptive Statistics

Table B.1 Percentage of Physical Care to Father, Classified by Living Arrangements and Genders

	Non-co-residence		Co-residence	
	Male n=84	Female n=80	Male n=52	Female n=57
Personal care				
Never / rarely	95.2	86.1	69.2	77.2
1 time / month	-	2.5	-	1.8
2-3 times / month	3.6	2.5	1.9	1.8
1 time / week	-	2.5	1.9	-
2-3 times / week	1.2	3.8	1.9	1.8
4-5 times / week	-	1.3	11.5	12.3
Every day	-	1.3	13.5	5.3
Meal Provider				
Never / rarely	56.0	43.0	23.1	12.3
1 time / month	7.1	8.9	-	-
2-3 times / month	11.9	13.9	1.9	1.8
1 time / week	11.9	15.2	3.8	5.3
2-3 times / week	3.6	7.6	-	3.5
4-5 times / week	8.3	7.6	40.4	19.3
Every day	-	3.8	30.8	57.9
Domestic works				
Never / rarely	89.4	75.0	53.8	19.3
1 time / month	6.0	3.7	3.8	1.8
2-3 times / month	-	7.5	9.6	7.0
1 time / week	2.3	7.5	7.7	7.0
2-3 times / week	2.3	6.3	15.4	38.6
4-5 times / week	-	-	9.6	17.5
Every day	-	-	-	8.7

Table B.2 Percentage of Physical Care to Mother, Classified by Living Arrangements and Gender

	Non-co-residence		Co-residence	
	Male n=84	Female n=80	Male n=52	Female n=57
Personal care				
Never / rarely	91.7	83.7	72.5	72.8
1 time / month	2.1	2.0	-	2.5
2-3 times / month	1.0	2.0	2.9	-
1 time / week	2.1	5.1	1.4	1.2
2-3 times / week	1.0	4.1	1.4	1.2
4-5 times / week	2.1	2.0	13.0	11.1
Every day	-	-	8.7	11.1
Meal Provider				
Never / rarely	56.3	44.9	20.3	8.6
1 time / month	5.2	7.1	-	1.2
2-3 times / month	9.4	11.2	2.9	1.2
1 time / week	13.5	17.3	4.3	3.7
2-3 times / week	4.2	6.1	1.4	7.4
4-5 times / week	11.5	10.2	39.1	23.5
Every day	-	3.1	31.9	54.3
Domestic works				
Never / rarely	87.6	76.5	53.6	16.0
1 time / month	5.2	4.1	2.9	1.2
2-3 times / month	-	7.1	4.3	6.2
1 time / week	3.1	6.1	10.1	13.6
2-3 times / week	4.1	6.1	15.9	34.6
4-5 times / week	-	-	-	7.4
Every day	-	-	13.0	21.0

Table B.3 Percentage of Emotional Care to Father, Classified by Living Arrangements and Gender

	Non-co-residence		Co-residence	
	Male n=84	Female n=80	Male n=52	Female n=57
Trips				
Never / rarely	34.5	42.5	23.1	17.5
1 time / year	14.3	11.3	1.9	10.5
Every 6-7 month	17.9	18.8	1.9	8.8
Every 4-5 month	2.4	1.3	-	-
Every 2-3 month	2.4	-	-	-
1 time / month	17.9	21.3	51.9	45.6
> 1 time / month	10.7	5.0	21.2	17.5
To see doctor				
Never / rarely	54.8	48.8	17.3	14.0
1 time / year	10.7	6.3	-	3.5
Every 6-7 month	9.5	16.3	9.5	17.5
Every 4-5 month	-	2.5	-	-
Every 2-3 month	-	1.3	3.8	5.3
1 time / month	20.2	22.5	53.8	56.1
> 1 time / month	4.8	2.5	11.5	3.5
To visit temple				
Never / rarely	60.7	56.3	40.4	33.3
1 time / year	7.1	10.0	1.9	1.8
Every 6-7 month	7.	5.0	3.8	3.5
Every 4-5 month	-	-	-	-
Every 2-3 month	1.2	1.3	-	-
1 time / month	16.7	22.5	19.2	26.3
> 1 time / month	7.1	5.0	32.7	35.1

Table B.3 (Continued)

	Non-co-residence		Co-residence	
	Male n=84	Female n=80	Male n=52	Female n=57
To meet friend				
Never / rarely	85.7	85.0	61.5	64.9
1 time / year	-	3.8	-	1.8
Every 6-7 month	2.4	2.5	-	1.8
Every 4-5 month	-	-	-	-
Every 2-3 month	-	-	-	-
1 time / month	7.1	8.8	32.7	24.6
> 1 time / month	4.8	-	5.8	7.0
To go shopping				
Never / rarely	52.4	53.8	44.2	31.6
1 time / year	7.1	8.8	-	1.8
Every 6-7 month	4.8	3.8	-	3.5
Every 4-5 month	-	-	-	-
Every 2-3 month	1.2	1.3	-	-
1 time / month	15.5	26.3	15.4	15.8
> 1 time / month	19.0	6.3	40.4	47.4
Conversation				
Never / rarely	16.7	13.8	3.8	-
1 time / month	9.5	15.0	1.9	-
2-3 times/month	4.8	10.0	3.8	3.5
1 time/week	13.1	5.0	-	1.8
2-3 time/week	32.1	12.5	-	3.5
4-5 time/week	16.7	22.5	1.9	3.5
every day	7.1	11.3	88.5	87.7

Table B.4 Percentage Emotional Care to Mother, Classified by Living Arrangements and Gender

	Non-co-residence		Co-residence	
	Male n=96	Female n=98	Male n=68	Female n=81
Trips				
Never / rarely	35.4	38.8	17.4	22.2
1 time / year	15.6	11.2	5.8	8.6
Every 6-7 month	17.7	20.4	5.8	9.9
Every 4-5 month	2.1	2.0	-	-
Every 2-3 month	2.1	-	-	1.2
1 time / month	17.7	21.4	49.3	38.3
> 1 time / month	9.4	6.1	21.7	19.8
To see doctor				
Never / rarely	46.3	45.9	4.3	9.9
1 time / year	8.4	6.1	2.9	1.2
Every 6-7 month	13.7	17.3	8.7	18.5
Every 4-5 month	-	2.0	-	-
Every 2-3 month	-	3.1	2.9	3.7
1 time / month	29.5	19.4	63.8	55.6
> 1 time / month	2.1	6.1	17.4	11.1
To visit temple				
Never / rarely	57.3	50.0	30.9	30.9
1 time / year	6.3	11.2	4.4	3.7
Every 6-7 month	7.3	7.1	2.9	4.9
Every 4-5 month	1.0	-	-	1.2
Every 2-3 month	-	1.0	-	-
1 time / month	18.8	22.4	16.2	23.5
> 1 time / month	9.4	8.2	45.6	35.8

Table B.4 (Continued)

	Non-co-residence		Co-residence	
	Male n=96	Female n=98	Male n=68	Female n=81
To meet friend				
Never / rarely	86.5	81.6	62.3	70.4
1 time / year	1.0	3.1	-	1.2
Every 6-7 month	1.0	5.1	-	1.2
Every 4-5 month	-	-	-	-
Every 2-3 month	-	-	-	-
1 time / month	8.2	9.2	29.0	21.0
> 1 time / month	3.1	1.0	8.7	6.2
To go shopping				
Never / rarely	54.2	48.0	27.9	23.5
1 time / year	8.3	8.2	1.5	1.2
Every 6-7 month	4.2	7.1	1.5	3.7
Every 4-5 month	-	-	-	-
Every 2-3 month	1.0	1.0	-	-
1 time / month	13.5	22.4	14.7	24.7
> 1 time / month	18.8	13.3	54.4	46.9
Conversation				
Never / rarely	7.3	11.2	-	-
1 time /month	12.5	10.2	1.4	1.2
2-3 time/month	5.2	10.2	-	-
1 time/week	14.6	14.3	1.4	2.5
2-3 time/week	34.4	17.3	-	4.9
4-5 time/week	17.7	23.5	-	2.5
everyday	8.3	13.3	92.6	88.9

Table B.5 Percentage of Emotional Caregiving, Classified by Living Arrangements and Gender

	<u>Father</u>		<u>Mother</u>	
	Non-co-residence	Co-residence	Non-co-residence	Co-residence
Trips				
Never / rarely	38.4	20.2	36.9	20.0
1 time / year	12.8	6.4	13.3	7.3
Every 6-7 month	18.3	5.5	19.0	8.0
Every 4-5 month	1.8	-	2.1	-
Every 2-3 month	1.2	-	1.0	0.7
1 time / month	19.5	48.6	19.5	43.3
> 1 time / month	7.9	19.3	7.7	20.7
To see doctor				
Never / rarely	51.8	15.6	45.6	7.3
1 time / year	8.5	1.8	7.2	2.0
Every 6-7 month	12.8	13.8	15.4	14.0
Every 4-5 month	1.2	-	1.0	-
Every 2-3 month	0.6	-	1.5	3.3
1 time / month	21.3	55.0	24.1	59.3
> 1 time / month	3.7	7.3	4.1	14.0
To visit temple				
Never / rarely	58.5	36.7	53.3	30.7
1 time / year	8.5	1.8	8.7	4.0
Every 6-7 month	6.1	3.7	7.2	0.7
Every 4-5 month	-	-	-	-
Every 2-3 month	1.2	-	1.0	20.0
1 time / month	19.5	22.9	20.5	40.0
> 1 time / month	6.1	33.9	8.7	

Table B5 (Continued)

	Father		Mother	
	Non-co-residence	Coresidence	Non-co-residence	Co-residence
To meet friend				
Never / rarely	85.4	63.3	84.0	66.7
1 time / year	1.8	0.9	2.1	0.7
Every 6-7 month	2.4	0.9	3.1	0.7
Every 4-5 month	-	-	-	-
Every 2-3 month	-	-	-	-
1 time / month	7.9	28.4	8.8	24.7
> 1 time / month	2.4	6.4	2.1	7.3
To go shopping				
Never / rarely	53.0	37.6	51.0	25.5
1 time / year	7.9	0.9	8.2	1.3
Every 6-7 month	4.3	1.8	5.7	2.7
Every 4-5 month	-	-	-	-
Every 2-3 month	1.2	-	1.0	-
1 time / month	20.7	15.6	18.0	20.0
> 1 time / month	12.8	44.0	16.0	50.0
Conversation				
Never / rarely	15.2	1.8	9.3	0.7
1 time / month	12.2	0.9	11.3	0.7
2-3 times/month	7.3	1.8	7.7	-
1 time/week	14.0	0.9	14.4	2.0
2-3 times/week	22.6	3.7	25.8	2.7
4-5 times/week	19.5	2.8	20.6	1.3
everyday	9.1	88.1	10.8	92.7

Table B.6 Mean, Standard Deviation of Emotional Caregiving, Classified by the Sandwich Generations' Education Attainments

	Trips				To visit a doctor				To visit a temple				To meet a friend				To go shopping				Conversation			
	\bar{x}	SD	MIN	MAX	\bar{x}	SD	MIN	MAX	\bar{x}	SD	MIN	MAX	\bar{x}	SD	MIN	MAX	\bar{x}	SD	MIN	MAX	\bar{x}	SD	MIN	MAX
<u>Father</u>																								
Primary	1.48	1.12	1	6	2.87	2.01	1	7	1.65	1.46	1	6	1.22	1.04	1	6	1.52	1.59	1	7	4.61	2.19	1	7
Secondary	2.39	2.25	1	7	2.71	2.01	1	6	2.54	2.30	1	7	1.11	.41	1	7	2.29	2.30	1	7	3.75	2.50	1	7
High school	2.89	2.27	1	7	3.00	2.21	1	7	2.29	2.23	1	7	1.28	1.16	1	6	2.64	2.53	1	7	4.42	2.33	1	7
Diploma	3.96	2.20	1	7	3.56	2.38	1	7	3.12	2.47	1	7	1.94	2.01	1	7	4.02	2.73	1	7	5.22	1.90	1	7
Bachelor	4.50	2.21	1	7	3.82	2.35	1	7	3.94	2.67	1	7	2.73	2.40	1	7	4.32	2.65	1	7	5.65	1.79	1	7
Master / higher	4.68	2.37	1	7	4.18	2.40	1	7	4.18	2.75	1	4	2.77	2.58	1	7	4.32	2.69	1	7	5.64	1.62	1	7
	***p < .001				**p < .01				*p < .05				**p < .01				**p < .01				*p < .05			
<u>Mother</u>																								
Primary	1.50	1.28	1	6	3.27	2.22	1	7	1.50	1.28	1	6	1.00	.000	1	1	1.80	1.90	1	7	5.03	2.18	1	7
Secondary	3.00	2.39	1	7	3.66	2.33	1	7	3.28	2.60	1	7	1.36	1.24	1	6	3.02	2.73	1	7	5.26	2.06	1	7
High school	2.75	2.27	1	7	3.32	2.36	1	7	2.88	2.61	1	7	1.48	1.53	1	7	2.75	2.52	1	7	4.84	2.22	1	7
Diploma	3.82	2.45	1	7	3.67	2.34	1	7	3.07	2.4	1	7	1.69	1.73	1	7	4.20	2.67	1	7	5.53	1.73	1	7
Bachelor	4.60	2.14	1	7	4.31	2.23	1	7	4.35	2.5	1	7	2.78	2.43	1	7	4.92	2.50	1	7	5.68	1.74	1	7
Master / higher	4.70	2.17	1	7	4.79	2.21	1	7	4.53	2.5	1	7	2.91	2.53	1	7	4.59	2.53	1	7	5.88	1.38	1	7
	***p < .001				**p < .01				*p < .05				***p < .001				***p < .001				***p < .001			

Table B.7 Percentage of Parents Assistance, Classified by Living Arrangements

	Father		Mother	
	Non-co- residence n=163	Co-residence n=107	Non-co-residence n=192	Co-residence n=147
Grand child-rearing				
Least	26.4	5.6	26.0	1.4
Less	13.5	4.7	13.5	3.4
Less than moderate	22.1	4.7	21.4	3.4
Moderate	22.7	33.6	21.4	19.7
More than moderate	5.5	24.3	6.3	30.6
Almost	3.7	10.3	3.6	10.9
Most	6.1	16.8	7.8	30.6
Counseling				
Least	13.6	2.8	12.5	1.4
Less	9.9	3.7	9.4	2.7
Less than moderate	9.9	3.7	6.8	3.4
Moderate	24.8	17.8	27.1	14.9
More than moderate	20.4	22.4	20.3	20.3
Almost	15.4	29.0	13.5	25.7
Most	6.2	20.6	10.4	31.8
Financial				
Least	24.8	15.9	29.8	14.3
Less	19.3	13.1	18.8	17.0
Less than moderate	21.1	16.8	18.3	12.9
Moderate	22.4	32.7	22.0	28.6
More than moderate	4.3	8.4	3.7	5.4
Almost	3.7	6.5	4.2	6.8
Most	4.3	6.5	3.1	15.0

Table B.8 Percentage of the Selective Background Characteristics of the Sandwich Generation Classified by Living Arrangement

Selective characteristics	Non-co-residence n=219	Co-residence n=181
Sex		
Male	50.7	47.0
Female	49.3	53.0
Marital status		
Marriage	82.2	70.7
Widow/separate/divorce	17.8	29.3
Education		
Primary	11.9	5.5
Secondary	15.1	10.5
High school	15.5	11.0
Diploma	16.4	13.8
Bachelor	33.8	46.4
Master/higher	7.3	12.7
Non-co-residence	$\bar{x} = 12.95$ SD.= 3.671 MAX= 18 MIN = 6	
Co-residence	$\bar{x} = 14.25$ SD.= 3.228 MAX= 18 MIN = 6	
Income		
< 10,000	26.0	16.6
10,001-20,000	34.7	29.8
20,001-30,000	17.8	32.6
30,001-40,000	5.9	6.1
40,001-50,000	11.0	9.9
> 50,001	4.6	5.0
Non-co-residence	$\bar{x} = 22,227.40$ SD.= 14384.755 MAX=55,000 MIN=5,000	
Co-residence	$\bar{x} = 24,483.43$ SD.= 13581.431 MAX= 55,000 MIN = 5,000	

Table B.8 (Continued)

Selective characteristics	Non-co-residence n=219	Co-residence n=181
Total number of family member		
2	4.1	--
3	38.4	2.8
4	35.2	19.3
5	16.4	33.1
6	4.1	27.6
>6	1.8	17.2
Non-co-residence \bar{x} = 3.8 SD.= 1.071 MAX=10 MIN=2		
Co-residence \bar{x} = 5.5 SD.= 1.377 MAX=11 MIN=3		
Sibling		
Single child	32.9	67.1
Have sib(s)	60.1	39.9
Financial status (compared to sibling(s))		
Poorer	19.2	12.5
Equal	49.7	64.1
Poorer	31.1	23.4
	(n=193)	(n=128)

Table B.9 Percentage of Problem of Parents Caregiving and Conflict Levels in Respondent Original Family, Classified by Living Arrangement

	Non-co-residence n=219	Co-residence n=181
Number of who have problems		
Yes	39.7	19.9
No	60.3	81.1
Problems associated with caregiving		
Don't have sufficient time due to work commitments	36.5	39.4
Don't have sufficient time due to child rearing	29.8	24.2
Parents live in other province	14.6	--
Increase in expenses	9.0	22.6
Decrease in living / house space	7.3	11.4
Conflict between parents and respondent's spouse	2.8	2.4
Conflict levels in respondent original family		
Respondent and sibling(s)		
Less than moderate	79.8	81.8
Moderate	13.5	15.9
More than moderate	6.7	2.3
Respondent and parents		
Less than moderate	91.3	89.5
Moderate	6.8	9.3
More than moderate	1.9	1.2
Respondent's parents and respondent's sibling(s)		
Less than moderate	87.0	86.4
Moderate	9.3	12.1
More than moderate	3.9	1.5

APPENDIX C

Matrices of Simple Correlation Coefficients of Variable

Table C.1 Matrix of Simple Correlation Coefficients of Variables of Daily Activities Caregiving for Father

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	(P)FINCL	N-CORESD	NUMSIB
AGE	-.038													
MARI	-.203**	-.138*												
EDU	-.061	-.043	.125*											
T.INC	.146*	.178**	.179**	.442**										
N.CHILD	.007	.402**	.088	-.152*	.000									
N.FAM	.028	.129*	.105	.076	.296**	.434**								
(P)AGE	.060	.624**	-.114	-.087	.224**	.310**	.219**							
HEALTH	.076	-.211**	.109	.164**	.070	-.148*	-.004	-.222**						
G-CHILD	.085	-.024	.032	.278**	.252**	-.027	.326**	-.044	.188**					
COUSEL	.008	-.098	.110	.346**	.149*	-.022	.248**	-.204**	.198**	.626**				
(P)FINCL	.050	-.158**	-.052	.221**	.131*	-.066	.175**	-.085	.189**	.4852**	.548**			
N-CORESD	-.019	-.075	.119*	-.179**	-.177**	-.040	-.602**	-.129*	-.147*	-.440**	-.337*	-.168**		
NUMSIB	.060	.065	.075	-.307**	-.082	.060	-.019	.335**	-.135*	-.260**	-.192**	-.056	.147*	
(S)DAILY	-.106	.08	-.071	.028	-.035	-.024	-.151*	.134*	-.251**	-.273**	-.163*	-.132	.353**	.174*

Table C.2 Matrix of Simple Correlation Coefficients of Variables of Daily Activities Caregiving for Mother

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	(P)FINCL	N-CORESD	NUMSIB
AGE	-.045													
MARI	-.191**	-.103												
EDU	-.085	-.080	.1174*											
T.INC	.092	.140**	.178**	.410**										
N.CHILD	.025	.426**	.057	-.174**	.063									
N.FAM	-.008	.128*	.125*	.047	.336**	.438**								
(P)AGE	.047	.665**	-.141**	-.020	.269**	.365**	.159**							
HEALTH	.048	-.093	.019	.095	.085	-.091	.048	-.136*						
G-CHILD	.057	-.033	-.058	.128*	.053	-.019	.277**	-.021	.170**					
COUSEL	-.069	-.086	-.012	.240**	.052	-.028	.194**	-.064	.192**	.569**				
(P)FINCL	.022	-.034	-.109*	.148**	.075	-.028	.194**	-.064	.192**	.569**	.592**			
N-CORESD	-.030	-.078	.187**	-.136*	-.114*	-.048	-.528**	-.139**	-.110*	.542**	-.369**	-.252**		
NUMSIB	.035	.087	.042	-.214*	-.013	.034	-.036	.325**	-.068	-.140*	-.0167**	-.026	.086	
(S)DAILY	-.221**	.108	.038	.065	.058	.019	-.099	.161**	-.175**	-.305**	-.122*	-.097	.342**	.174**

Table C.3 Matrix of Simple Correlation Coefficients of Variables of Emotional Caregiving for Father

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	FINCL	N-CORESD	NUMSIB
AGE	-.038													
MARI	-.203**	-.138*												
EDU	-.061	-.043	.125*											
T.INC	.146*	.178**	.179**	.442**										
N.CHILD	.007	.402**	.088	-.152*	.000									
N.FAM	.028	.129*	.105	.076	.296**	.434**								
(P)AGE	.060	.624**	-.114	-.087	.224**	.310**	.219**							
HEALTH	.076	-.211**	.109	.164**	.070	-.148*	-.004	-.222**						
G-CHILD	.085	-.024	.032	.278**	.252**	-.027	.326**	-.044	.188**					
COUSEL	.008	-.098	.110	.346**	.149*	-.022	.248**	-.204**	.198**	.626**				
(P)FINCL	.050	-.158**	-.052	.221**	.131*	-.066	.175**	-.085	.189**	.4852**	.548**			
N-CORESD	-.019	-.075	.119*	-.179**	-.177**	-.040	-.602**	-.129*	-.147*	-.440**	-.337*	-.168**		
NUMSIB	.060	.065	.075	-.307**	-.082	.060	-.019	.335**	-.135*	-.260**	-.192**	-.056	.147*	
(S)EMOTION	-.115	-.013	-.106	.085	-.135*	-.031	-.241**	-.019	-.099	-.147*	-.046	.008	.325**	.104

Table C.4 Matrix of Simple Correlation Coefficients of Variables of Emotional Caregiving for Mother

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	(P)FINCL	N-CORESD	NUMSIB
AGE	-.045													
MARI	-.191**	-.103												
EDU	-.085	-.080	.1174*											
T.INC	.092	.140**	.178**	.410**										
N.CHILD	.025	.426**	.057	-.174**	.063									
N.FAM	-.008	.128*	.125*	.047	.336**	.438**								
(P)AGE	.047	.665**	-.141**	-.020	.269**	.365**	.159**							
HEALTH	.048	-.093	.019	.095	.085	-.091	.048	-.136*						
G-CHILD	.057	-.033	-.058	.128*	.053	-.019	.277**	-.021	.170**					
COUSEL	-.069	-.086	-.012	.240**	.052	-.028	.194**	-.064	.192**	.569**				
(P)FINCL	.022	-.034	-.109*	.148**	.075	-.028	.194**	-.064	.192**	.569**	.592**			
N-CORESD	-.030	-.078	.187**	-.136*	-.114*	-.048	-.528**	-.139**	-.110*	.542**	-.369**	-.252**		
NUMSIB	.035	.087	.042	-.214*	-.013	.034	-.036	.325**	-.068	-.140*	-.0167**	-.026	.086	
(S)EMOTION	-.161**	.017	.033	.101	-.063	-.051	-.190**	-.012	-.064	-.214**	-.071	-.028	.301**	.110

Table C.5 Matrix of Simple Correlation Coefficients of Variables of Financial Support for Father

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	(P)FINCL	WORK	PENSION	N-CORESD	NUMSIB
AGE	-.038															
MARI	-.203**	-.138*														
EDU	-.061	-.043	.125*													
T.INC	.146*	.178**	.179**	.442**												
N.CHILD	.007	.402**	.088	-.152*	.000											
N.FAM	.028	.129*	.105	.076	.296**	.434**										
(P)AGE	.060	.624**	-.114	-.089	.224**	.310**	.219**									
HEALTH	.076	-.211**	.109	.164**	.070	-.148*	-.004	-.222**								
G-CHILD	.085	-.024	.032	.278**	.252**	-.027	.326**	-.044	.188**							
COUSEL	.008	-.098	.110	.346**	.149*	-.022	.248**	-.204**	.198**	.626**						
(P)FINCL	.050	-.158**	-.052	.221**	.131*	-.066	.175**	-.085	.189**	.485**	.548*					
WORK	-.069	-.316**	.023	-.062	-.144*	-.131*	-.175**	-.411**	.216**	-.055	.049	.218**				
PENSION	.060	-.032	.059	.308**	.260**	-.020	.119	.013	.150*	.186**	.192**	.192**	-.268**			
N-CORESD	-.019	-.075	.119*	-.179**	-.177**	-.040	-.602**	-.129*	-.147*	-.440*	-.337**	-.168**	.153*	-.227**		
NUMSIB	.060	.065	.075	-.307**	-.082	.060	-.3019	.335**	-.135*	-.260**	-.192**	-.056	-.187**	-.174*	.147*	
(S)FINCL	.034	-.084	-.004	-.096	-.093	.055	-.062	.046	-.091	-.103	-.069	-.049	.010	-.127	.185*	.196**

Table C.6 Matrix of Simple Correlation Coefficients of Variables of Financial Support for Mother

VARIABLE	SEX	AGE	MARI	EDU	T.INC	N.CHILD	N.FAM	(P)AGE	HEALTH	G-CHILD	COUSEL	(P)FINCL	WORK	PENSION	N-CORESD	NUMSIB
AGE	-.045															
MARI	-.191**	-.103														
EDU	-.085	-.080	.117*													
T.INC	.092	.140**	.178**	.410**												
N.CHL	.025	.426**	.057	-.174**	.063											
N.FAM	-.008	.128*	.125*	.047	.336**	.438**										
(P)AGE	.047	.665**	-.141**	-.020	.269**	.365**	.159**									
HEALTH	.048	-.093	.019	.095	.085	-.091	.048	-.136*								
G-CHILD	.057	-.033	-.058	.128*	.053	-.019	.277**	-.021	.170**							
COUSEL	-.069	-.086	-.012	.240**	.052	-.028	.217**	-.187**	.227**	.647**						
(P)FINCL	.022	-.034	-.109*	.148**	.075	-.028	.194**	-.064	.192**	.569**	.592**					
WORK	-.101	-.184**	.031	-.096	-.182**	-.101	-.115*	-.312**	.141**	-.029	.117*	.302**				
PENSION	.050	.010	.061	.285**	.200**	.004	.148**	-.010	.201**	.174**	.210**	.176**	-.169**			
N-CORESD	-.030	-.078	.187**	-.136*	-.114*	-.048	-.528**	-.139**	-.110*	-.542**	-.369**	-.252**	.126*	-.278**		
NUMSIB	.035	.087	.042	-.214**	-.013	.034	-.036	.325**	-.068	-.140*	-.167**	-.026	-.049	-.179**	.086	
(S)FINCL	-.028	-.052	.099	-.085	-.035	-.029	-.080	.010	-.028	-.118	-.054	-.018	.031	-.164**	.205**	.172**

BIOGRAPHY

NAME

Orathai Vejbhumi

ACADEMIC BACKGROUND

Bachelor of Liberal Arts (Linguistics),
Thammasat University
Master of Development Communication,
Chulalongkorn University
Master of Public and Private Management,
National Institute of Development
Administration

PRESENT POSITION

Air purser, Thai Airways International
Public Company Limited
Instructor, Cabin Crew Training Department,
Thai Airways International Public
Company Limited