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# Intergenerational Solidarity and Its Effects on Life Satisfaction Among Chinese Elders

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INTERGENERATIONAL SOLIDARITY AND ITS EFFECTS ON LIFE SATISFACTION AMONG CHINESE ELDERS

by

QI WANG

Under the Direction of Heying Jenny Zhan

ABSTRACT

This study explores the association between intergenerational relationships and life satisfaction among urban elders in China, with a focus on the emotional dimension of intergenerational solidarity. Individual factors, effects of associational, affectual, functional and structural solidarity were examined by analyzing data collected from the Zhenjiang City Intergenerational Relationship Survey (ZJIRS) in 2007, Jiangsu province, China.

Study results revealed that elders' marital status, educational background, pension, and self-rated health were closely related to the degree of intergenerational solidarity. A higher level of education, possession of a medical insurance, and better heath condition had a positive relationship with elders' life satisfaction. Through the comparison of intergenerational exchanges from both parents and children, the study found that Chinese elders had the highest level of life satisfaction when they receive more frequent contacts, financial support, and affection from their children. This study might contribute to the existing body of literature in the overall theoretic understandings of intergenerational solidarity, life satisfaction, as well as the association between specific dimensions of intergenerational solidarity and older adults' life satisfaction.

INDEX WORDS: Chinese elders, Intergenerational solidarity, Life satisfaction

# INTERGENERATIONAL SOLIDARITY AND ITS EFFECTS ON LIFE SATISFACTION AMONG CHINESE ELDERS

by

QI WANG

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2011

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2011

# INTERGENERATIONAL SOLIDARITY AND ITS EFFECTS ON LIFE SATISFACTION AMONG CHINESE ELDERS

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# CHAPTER ONE

# INTRODUCTION

Along with the rapid development of technologies and biosciences, people in 21st Century are living longer than ever before. Undoubtedly, longer life expectancy can be important for many, if not most people. However, having a longer life does not necessarily indicate a joyful or happy old age. As a result, when scientists try every means to prolong human lives, it is crucial to keep in mind that the quality of life and the length of life are both significant parts in defining an old age. For this reason, many gerontologists and researchers in social psychology are interested in examining the factors influencing life satisfaction among older adults.

In China, research related to life satisfaction and the well-being of older adults is attracting more attention as the country begins a period of rapid population aging (Yi, Vaupel, Zhenyu, Chunyuan, & Yuzhi, 2002; T. H.Yuan, Tianlu, Yu, Jingneng,& Zhongtant, 1992). According to Kwong and Zimmer (2004), the United Nations (2000) reports that "the percentage of the total population 60 years and older will more than double during the next 30 years to more than 20%, and the population size aged 60 years and older will more than triple to 350 million by 2030" (p. 45). Ensuring the well-being of such large numbers of older people in China will require a massive effort on the part of researchers, including gerontologists, and the Chinese government.

Existing literature shows that health conditions, social economic status, social and familial relationships as well as demographic variables such as age, gender, and education are among the predictors of life satisfaction for the aged (Zhang & Yu, 1998). Many researchers have made tremendous efforts to examine those influential factors related to elders' life satisfaction, with particular attention paid to the social and

demographic factors. However, among these studies, only few have focused on intergenerational relationship in different cultures. Most importantly, the existing measures of life satisfaction were mainly developed for Western populations and their applicability to other cultures is unknown (Lou, Chi, & Mjelde-Mossey, 2008). Moreover, different cultural norms and unique cultural characteristics can affect and bias study results on life satisfaction (Goodwin, Cook, & Yung, 2001; Silverman, Hecht, & McMillin, 2000; Zhang & Yu, 1998).

In the current study, I apply the intergenerational solidarity model and equity theory to examine parent-adult children relationship and their effects on life satisfaction among Chinese elders. Using data collected from Zhengjiang City Intergenerational Relationship Survey (ZJIRS), I explore the association between intergenerational family patterns and elders' life satisfaction in China. These patterns include intergenerational living arrangements and intergenerational support. Special attention will be paid to the emotional dimension of intergenerational solidarity including closeness between family members and frequency of contact between the generations. Study results will contribute to the body of literature that increases the understanding of intergenerational exchange and solidarity in the cultural context of China.

# CHAPTER TWO

# LITERATURE REVIEW

## Definition of life satisfaction

To obtain a high level of life satisfaction is one of the ultimate goals that most people want to reach in their lives. It is a concept that refers to the subjective appraisal of one's life. In academic fields, life satisfaction is a major variable in the study of aging and older populations (Fernandez-Ballesteros et al., 2001). The importance of the cognitive evaluation of one's life has been well recognized as a significant indicator of aging well (Strawbridge et al., 2002). From a cognitive perspective, there are two major approaches to examining life satisfaction with two different assessment instruments. As Lou et al. (2008) explained, one approach views life satisfaction as a person's evaluation of his or her current life in relation to self, others, context, and time dimension. The other approach focuses on the evaluation of multiple facets of one's life. The two corresponding instruments are the Life Satisfaction Index A or LSI-A, developed by Neugarten, Navighurst and Tobin in 1960s and the Salamon Conte Life Satisfaction in the EldersElders Scale or LESE in 1984 (Salamon & Conte, 1984). Both of the measurements have proved useful in examining the barriers and contributors to the achievement of high levels of life satisfaction among older persons (Barrett & Murk, 2006). Regardless of which approach or instruments are used, previous studies conclude that both personal and environmental factors can affect life satisfaction, including for example, marital status, functional ability, activity level, and social relationships (Fernandez-Ballesteros, 2001, Zhang & Yu, 1998).

**Culture and life satisfaction**

Aging, just like all human experience, has social, cultural, and physical dimensions (Keith et al., 1994). When people getting older, they may have questions like *where is the best place to grow old*? or *Whom should I live with when I am old*? In fact, what people are asking is not only about living arrangements, but it is also about the meanings of aging well in different socio-cultural settings. As Keith et al. (1994) stated, "Attributes of social and cultural settings were not simply contexts that affected aging; they were part of the very meaning of age itself "(p. xii). That is to say, individuals may have unique criterion for assessing their quality of life, but their social environments and values often influence their perceptions.

The influence of culture and social environments also are evident in research measurements. For example, existing concepts and measures developed in Western cultures place a great emphasis on physical aspects, such as health and physical well being, while in China, social and relational aspects might be more crucial to Chinese elders' life satisfaction (Chappell & Lai, 2001; Lu, 2001). A satisfactory old age to Chinese elders not only includes the basic aspects of life, such as meals, shelter, and financial resources, but also includes a sense of connection to others, such as family members, neighbors, and friends (Chan et al., 2000). Among those various types of relationships, familial relationships are the most important ones to the Chinese elders. In China, the family is expected to take the major responsibility of providing financial and emotional support to the aged (Lou et al., 2008). As Zhang et al. (1997) indicate, stressful family relationships and lack of family care can result in Chinese elders' poor psychological well-being. Another example of how culture influences one's standard of

aging well is through living arrangements and gender expectations. In China, traditionally, older parents prefer to live with adult children, usually their oldest son. In one study set in China, researchers found that the closer the son lives to the elder, the higher levels of life satisfaction the elder feels (Zhang & Yu, 1998). Co-residence with children is a cultural norm in China and perceived as beneficial to elders. On the contrary, co-residence with children might not be the ideal living arrangement for elders in western countries, because independence in the west is valued on top of interdependence. As discussed above, culture is an influential factor that should not be ignored in studying life satisfaction because it sets up criterion for determining the levels of life satisfaction for elders.

**Population Aging in China**

Population aging is such a prevalent phenomenon in almost every country across the world. In 2009, the number of older persons was around 700 millions in the world; the number is estimated to triple in the next 40 years to around 2 billion (United Nations, 2009). This global issue can be more prevalent and problematic in developing countries. For example, China is experiencing extraordinarily rapid population growth due to the large population base, the effects of the Chinese baby-boomers, the One-child policy, and increased longevity. Population aging will have unexpected consequences and implications to the individuals, families, and the whole society. According to a United Nations (2009) report on aging population, globally the population of older persons is growing at a rate of 2.6% per year. To be specific, in 1950, China only had 41 million older persons aged 60 and above, and this number has increased to 160 millions in 2009 and the projected number of older persons in 2050 is 440 million, respectively (United Nations, 2009). In addition, the current population of older persons is also aging,

implying the increased number of the oldest-old. This population growth speed among the oldest-old is increasing at a rate of 4.0 % per year recently (United Nations, 2009). In China, the current population of the oldest-old (80 or over) is around 18 million and it is projected to increase to 101 million in 2050 (United Nations, 2009). With such a huge number of elders in the population, ensuring their quality of life can be very challenging. In this situation, examining the influential factors of life satisfaction with particular attention paid to the Chinese context appears to be extremely valuable.

**Changing dynamics of elders' lives in China**

The question remains whether studies about life satisfaction in Western countries can apply to the Chinese context. Besides culture differences, modernization is another issue. China is on its path to modernization, which unavoidably is filled with chaos and unexpected social challenges. The chaos is caused by the discordance of global modernization and Chinese unique characteristics, due to the socialist planning (Cheung & Leung, 2004; Jiang, 1996). Therefore, along with the modernization, it is possible that what contributes the most to Chinese elders' life satisfaction have been changed as well.

During the process of modernization, the most noticeable change has been the family pattern. In 1950s, the total fertility rates were as high as 7.5 while this rate sharply declined in the late 1970s and early 1980s as the One-child policy began (Zimmer & Kwong, 2003). Similar to Hong Kong, household size has declined substantially over time, and the extended families gradually have been replaced by more nuclear families. The "4-2-1" (four grandparents, two adults, one child) family pattern is prevalent in China currently. Changing gender roles also occurred with modernization. In the past, a daughter's filial responsibility to her parents ended with her marriage as she transfers the

filial responsibility to her husband's parents (Chen & Short, 2008). In other words, the major responsibility for women is taking care of elders and children. Women are no longer obligated by cultural norms and morals to stay at home; instead, everyone can be employed outside of the home regardless of gender. Like Yu et al. (1997) stated, "in Communist China it was expected that all able-bodied people, sons and daughters, work outside the home, leaving elders to take care of grandchildren and household chores" (p. 75). Equity between men and women is a sign of civil development, but this raises the question: *who will take care of elders?* This situation could be challenging to Chinese elders because the changes are related to every aspect of elders' daily lives.

Those societal changes have brought problems and challenges, but traditional cultural norms have been remarkably resilient. As Xu and colleagues (2007) found, despite the decreased family size in cities, both older and younger Chinese still praise and value the concept of the family as an indivisible support unit. Other studies indicate that in 2000, for example, more than 60% of adults aged 65 and over still co-resided with their children (Zeng & Wang, 2003) and that living with sons has remained prevalent as living with daughters became more acceptable (Whyte, 2003; Zhan & Montgomery, 2003).

# CHAPTER THREE

# LITERATURE REVIEW

In many cases, scholars use the term self-rated quality of life (SQOL) interchangeably with life satisfaction, since SQOL has a strong correlation with life satisfaction, and both of them use a similar measurement in collecting data (Fakhoury & Priebe, 2002). In order to provide a comprehensive understanding of life satisfaction among older adults, I will review a number of literatures from various fields of study in the following. First, I will introduce the theoretical framework and significance of this study. Then I will discuss the determinants associated with life satisfaction.

## Theoretical Framework

### Intergenerational Solidarity

The concept of family solidarity was first recognized by researches in family sociology in the late 1960s (Bowen, 1960). Influenced by Landecker (1951), Nye and Rushing (1969) developed the family integration model with six major components: "associational integration, affectual integration, consensual integration, functional integration, normative integration, and goal integration" (p. 135). Several years later, this family integration model was rejected and further modified by Bengston, Olander, and Hadded (1976). The new model emphasized the degree of similarity between family members, such as shared behaviors and emotions. The intergenerational family solidarity is multidimensional, consisting six "distinct but interrelated" (Bengtson and Schrader, 1982, p. 116) dimensions: "associational solidarity, affectual solidarity, consensual solidarity, functional solidarity, normative solidarity, and structural solidarity" (p. 20). This study will be focusing on the following four solidarities: associational solidarity,

affectual solidarity, functional solidarity, and structural solidarity. Associational solidarity refers to the frequency of contract between family members. According to Lawton et al. (1994), gender differences might have some effects on associational solidarity. Daughters tend to have higher frequency of contact with mother compared to a son. Affectual solidarity concerns with the feelings of closeness between family members. This construct describes whether a family relationship is harmonious (Lawton et al., 1994). Functional solidarity is the exchange of help between parents and children. Structural solidarity is a measure of proximity including the living arrangements of parents and adult children, whether sharing living space, living nearby or living far away from each other (Lawton et al., 1994).

Intergenerational solidarity theory will provide insights for a better understanding of family relationships and its impact on aged parents. Specifically, it will direct me to examine various types of family relationships in Chinese culture and how different family structures affect life satisfaction among Chinese elders. Additionally, applying the intergenerational solidarity theory in this study will help me to gain a more comprehensive understanding of how various factors shape Chinese elders' aging experience and their life satisfaction.

**Equity Theory**

Equity theory, which is considered as an extension of social exchange theory, claims that balanced relationship contribute to higher levels of well-being (Walster, Walster, & Berscheid, 1978). If two groups or individuals in the exchange relationship are relatively dependent on each other at equal or similar levels, the relationship is viewed as balanced. Equity theory predicts that older people who receive support and

provide support equally with their adult children tend to experience higher levels of well-being (Lowenstein, Katz, & Gur-Yaish, 2007). In other words, older people who are either over benefited or under-benefited would not enjoy as high levels of well-being as those with reciprocal relationship with their adult children.

Applying the equity theory in this analysis of life satisfaction among Chinese elders allows me to better understand the family relation pattern in a different social-cultural context and further examine whether the prevalent family pattern in the West is also valued and significant in China.

**Significance**

The purpose of this study is to explore parent-adult children relationships and their effects on life satisfaction among Chinese elders. Although there are increased volumes of research on issues of intergenerational relationships and life satisfaction among older people, few studies have focused on intergenerational solidarity especially emotional support exchanges between parents and children, and even less studies have included Asian countries. Socio-familial relationship is embedded in social and cultural context. The cultural norms of individualism and independence in Western countries versus collectivism and interdependence in most of Asian countries have different impacts on the role that family members play in older persons' lives. A study carried out in Asian countries may find very different results from Western countries. Furthermore, along with the rapid economic development and social changes, the family lives for elders have changed over time. How Chinese elders lived in the past is not the same as how they live today and their values as well as filial expectations towards their children might be different too. Therefore, this study would contribute to the literature on the

understanding of factors influencing intergenerational solidarity and life satisfaction among older persons in a global perspective. It would provide an overview of how family patterns and familial relationship combining with contextual factors influence intergeneration relationships, and in turn influencing life satisfaction among Chinese elders. Findings from this paper may also have policy implications for the purpose of enhancing life satisfaction among Chinese elders.

**Demographic variables**

a) Age

Currently, there is no clear empirical evidence showing the causal relationship between age and life satisfaction. However, people would generally expect lower life satisfaction for older adults since old age often associate with several losses. Scholars sometimes refer to this issue as the "aging paradox" (Schwarz et al., 2010, p. 709; Kunzmann, Little, & Smith, 2000). On the one hand, some studies have found a negative relationship between age and life satisfaction (e.g., Klemmack & Roff, 1984; Wilson, 1967). For example, in a study by Wilson (1967), he reported that older people are often less happy than their younger counterparts. This finding was in accordance with another study reporting that the levels of life satisfaction decline as one's age increases beyond the age of 65 (Chen, 2001). On the other hand, Diener and colleagues' (1999) suggested the opposite: older people are often happier than young people. This finding is in line with results from a cross-sectional study in China that reported an increase in life satisfaction with age (Zhang, 2005). Many other researchers suggest, however, that differences in the levels of life satisfaction between young and old are not significant

(e.g., Herzog & Rodgers, 1981; Kunzmann, Little, & Smith, 2000; Mroczek & Kolarz, 1998).

Age itself may not relate to life satisfaction, but increased age often is associated with health problems; the loss of spouse, relatives and friends; or a lack of financial independence (Siedlecki et al., 2008). These factors may have some negative effects on elders' life satisfaction.

b) Gender

Previous research on gender differences in life satisfaction shows inconsistent results (Zhang & Leung, 2002). Wood and colleagues (1989) reviewed previously published studies on sex differences in well-being, and found that women reported greater happiness and life satisfaction than men. Similar results were found in a later study examining the correlation between health status, social network characteristics and life satisfaction among the elders from two different sites, Taiwan and eastern Oregon in the United States (Silverman et al., 2007). They found that network size significantly predicted higher levels of life satisfaction for Taiwanese men and women while increased network size only enhanced life satisfaction for women in Oregon, but not for men. Silverman et al. (2007) further indicated that women in Oregon have larger network range and lower density than Oregon men. That is to say, in the Oregon sample, women might have higher levels of life satisfaction than men. However, findings from Kudo et al. (2007) indicated a different result. In their study, 1710 older people from a rural town, Tashiro, in Japan, responded to the study questionnaires, which were developed with reference to the "Philadelphia Geriatric Center (PGC) morale scale" (p. 15). The life satisfaction questionnaire included questions of life circumstances, family, social

activities, health and some other demographic factors. The study found that in generally older women showed lower morale scores than men; that is to say, women tend to have lower life satisfaction compared to men.

In general, most studies have reported that women have lower life satisfaction than men (e.g., Chen & Silverstein, 2000; Kodo et al., 2007, Zhang & Leung, 2002). There are three possible explanations. First, women seem more likely to report greater negative feelings than do men, including greater depression (Goldman & Ravid, 1980; Nolen-Hoeksema, 1987) and greater mental problems (Gove & Tudor, 1973). Second, some researchers argue that women have higher levels of emotional intensity, so they often report higher levels of both positive and negative feelings (Diener et al., 1999; Fujita et al., 1991). Third, women tend to have lower levels of self-esteem than men, which may have some association to their lower levels of life satisfaction (Zhang & Leung, 2002).

c) Health condition/functional ability

Health status has often been one of the primary predictors determining life satisfaction. In Rowe and Kahn's (1998) definition of "successful aging", the very first criterion is the absence of disease. In most cases, people who report poor health, chronic problems or pain often score lower in life satisfaction than healthy people (Fernandez-Ballesteros, Zamarron, & Ruiz, 2001). Many studies about life satisfaction include the subject's health condition as an independent variable (e.g., Chen & Silverstein, 2000; Zhang & Yu, 1998; Fernandez-Ballesteros, 2001). For example, Zhang and Yu (1998) extensively examined correlates of life satisfaction among 350 Chinese elders who were aged 65 and above. A number of questionnaires were distributed to seniors in two

different sites: a geriatric out-patient clinic located in Beijing Hospital and a community near the hospital. Through a linear regression analysis, Zhang and Yu (1998) found that health status played a significant role in life satisfaction among Chinese elders. They further indicated that self-reported health status might be more important than actual health status in predicting life satisfaction.

d) Marital status

Marital status is one of the most salient social statuses in people's lives (George, 1980). According to our social rules and values, being married is often valued above being non-married (Diener et al., 2000). As Diner et al. (2000) explained, "when most individuals in a society were married, unmarried individuals were seen as deviant from social role expectations" (p. 420). Thus, many scholars believe that marriage is positively associated with individuals' subjective well-being (SWB) and thus enhances one's life satisfaction (Wood et al., 1989; Ball & Robbins, 1986; Bourque et al. 2005). Wood et al. (1989) explained that the benefits of being married can be interpreted from the perspective of role accumulation. Usually, marriage provides two additional roles, spouse and parent, and multiple role involvement is believed to have a positive impact on one's life (Thoits, 1983, 1986). In addition, being married may help individuals to lessen their life strains and increase their ability to cope with these strains (Gove et al., 1990). Furthermore, some studies found that being married brings benefits to individuals' mental health as well (Gove, 1972; Hughes & Gover, 1981). Gove (1972) pointed out that married people often report lower rates of psychological symptoms than those unmarried, and they are less likely to seek psychological services. This finding is supported by another study, carried out by Pearlin and Johnson in 1977. In their study, they developed

a unique scale to examine the correlation between marital status, life strains and depression. Their study result has shown that isolation is associated with depressive symptoms for both the married and the unmarried, but the unmarried are noticeably more severely depressed.

Although most of the studies have shown the positive relation between marriage and life satisfaction, some studies have found dissimilar results (Ball & Robbins, 1986; Hiring-Hidore et al., 1985). For example, Haring-Hidore and colleagues (1985) reported in their paper that the association between marital status and life satisfaction was weaker than they had expected. What they concluded was "it is possible, for example, that individuals who are more satisfied with their lives are more likely to be married", and there was no causality involved in this relation (p. 951). One of the interesting findings in this study is that age has some effects on marital status and SWB. The relationship was significantly stronger in the younger sample compared to older sample (Haring-Hidore et al., 1985). In addition, Chipperfield and Havens (2001) believed that being married brings greater benefit on the well-being of men than of women. Chipperfield and Havens's study also indicated that widowhood harms men more significantly than women, thus men are more likely to be re-married (2001). Another study done by Ball and Robbins (1986) discovered that marital status may be associated with life satisfaction, but the association is weak when demographics and social variables are controlled for, such as age, social participation, health, and education. They also found that life satisfaction among married Black men and women tend to be lower than that of Whites because of the disparities in education and the sex ratio gap between Black men and women. In conclusion, it is very possible that life satisfaction is not solely influenced by

marital status, but when it is combined with other personal or environmental factors; it may impact individuals' life satisfaction.

**Socio-economic status**

One of the most noticeable determinants of life satisfaction is socio-economic status. Many longitudinal and cross-sectional studies report that higher socio-economic status and higher education are related to stronger cognitive ability, and thus lead to higher levels of life satisfaction (Seeman, Albert, Lusignolo, & Berkman, 2001; Zunzunegui, Cuadra, Be ̀land, Del Ser, & Wolfson, 2000). Besides enhanced cognitive ability, education also increases individuals' self-confidence and motives one to pursue a satisfying life (Ross and Mirowsky, 1992). In a study, Paul and colleagues (2005) extensively examined secondary data including 958 older Canadian adults and reported that income is positively linked to life satisfaction for both men and women. Study findings also indicated that education plays a part in determining life satisfaction for the reason that education encourages "health-productive behaviors" and thus leads to a higher quality of life (Paul et al., 2005). In brief, socio-economic status appears to affect elders' life satisfaction, but whether it has an independent effect on life satisfaction still needs further examination (Clemente & Sauer, 2001).

**Living arrangements**

The living arrangements of older persons play an essential role in their family relationships with their adult children as well as their use of formal and inform care services (Hays, 2002). To choose a personal favorable living arrangement can be very challenging for older persons as their physical needs increase and their financial

resources decline (Jackson, Longino, Zimmerman, & Bradsher, 1991; Longino Jackson, Zimmerman, & Bradsher, 1991).

a) Living alone

Previous studies have not had clear consensus regarding living arrangements and life satisfaction among older people (Hays, 2002). In most studies, living alone has been found to be significantly associated with increased risk of institutionalization and unmet needs for physical and emotional assistance (Egleston et al., 1999; Desai et al., 2001; Hays, 2002). Gove and Hughes (1980) once explained that living alone may increase the risk of committing suicide, alcoholism, and other forms of pathological behavior where the presence of other people would minimize those problems. However, not all studies have supported this idea. For instance, a study found that women who live alone seem to protect or maintain their functional ability and have better mental health and vitality over time (Michael et al., 2001). However, when we take old age, functional limitations, lack of economic resources, and companionship into consideration, living alone and maintaining a higher level of life satisfaction may be challenging to older persons.

b) Co-residence

A number of scholars find that co-residence with adult children is beneficial to elders (Aquilino & Supple, 1991; Ng et al., 2002). For example, a study by Zunzunegui et al. (2001) found that widowers who share living arrangements with children report better self-rated health. A qualitative study by Ng and colleagues (2002) found similar results. They collected data by interviewing 50 older persons in Hong Kong regarding their living arrangements, geographic proximity, and their intergenerational relationships with adult children. They discovered that co-residence with adult children or having them live

nearby provides a sense of security, so elders are less worried about their daily life and finding immediate help in the event of an emergency. Study findings also indicate that living with adult children is positively related to better emotional support and thus enhances older persons' life satisfaction (Ng et al., 2002).

Because of traditional cultural norms, living with adult children might be a more noteworthy indicator of life satisfaction for the Chinese elders. Guo, Aranda, and Silverstein (2009) note geographic separation of adult children from their parents is a structural barrier and interferes with close intergenerational relationships, where the quality of intergenerational family relationships have always been valued in Chinese culture. When older Chinese parents live alone by themselves, they are more likely to experience reduced psychological wellbeing due to the feelings of loneliness and abandonment from their children (Du et al., 2004). Traditionally, living with a son is highly valued in China due to the beliefs that sons should take the major filial responsibility, but this old custom has gradually changed because of the rapid economic and social changes (Zhang & Yu, 1998). For instance, a study carried out by Yu et al. (1997) reported that the preference for living with a son significantly predicted mental health, while living with a daughter did not show a clear association with elders' mental health or life satisfaction. Another study conducted in 2008 indicated that sizable percentages of older adults are living with a daughter, particularly in urban areas (Chen & Short, 2008). This study found that living with a son is not noticeably advantageous, and co-residence with a daughter also shows a positive relationship to elders' emotional health. Undoubtedly, the continuous economic development and societal changes will not

only affect elders' living arrangements, but also influence every facet related to their life satisfaction.

**Socio-familial relationships**

Socio-familial relationships, as a primary dimension of social support, have found to be a strong indicator of life satisfaction among older adults (Chen & Silverstein, 2000). Many researcher include familial relationships in studies of life satisfaction (e.g., Chen & Silverstein, 2000; Katz, 2009), but few of them have taken the influence of culture into consideration. A study carried out in Germany reported that parents' life satisfaction improved when they received adequate emotional support from their children, while informational support from children was associated with decreased life satisfaction (Lang & Schutze, 2002). The authors further pointed out that culture and social context may have influenced study results. This observation suggests that the standard of what contributes to a good familial relationship can be diverse according to different socio-cultural contexts, and the expectations of filial fulfillment can be different from culture to culture.

For Chinese elders, family life is the focus of daily life. From a cultural perspective, harmonious family relationships and interdependence among family members are appraised and valued (Zhang & Yu, 1998). Lifelong loyalty between family members and avoiding family conflicts are expected (Schwarz et al., 2010). As a Chinese aphorism states, *cultivate individual moral character, run the family in unison, manage the nation in order, and peace will prevail throughout the universe*. This aphorism implies that besides being a righteous person, keeping a harmonious family relationship precedes everything else. This belief echoes the findings of Taiwanese study.

Leung and colleagues (2004) found that people living in communities with their family members placed the well-being of the family as a whole as the first priority. From a more realistic perspective, in China, familial relationships are not solely about fulfillment of elders' emotional expectations but also relate to the physical and material support that elders receive from their children. As Zhang and Yu (1998) explained, family conflicts or lack of family care will harm the elders psychologically and endanger their security in old age, thus causing reduced life satisfaction. Without support and care from adult children, Chinese elders' lives can be endangered, because only 17% of the population aged 60 years and older has access to a pension (Zhang, 2004). Consequently, the qualities of intergenerational family relationships seem more vital to Chinese elders. Furthermore, regarding intergenerational family relationships, emotional cohesion with adult children is as important as receiving financial support from children. Silverstein, Cong, and Li (2006) reported that stronger emotional cohesion with children improves elders' well-being and life satisfaction. Also, Guo, Aranda, and Silverstein (2009) explained in their paper that geographic distances between parents and their adult children may negatively affect the hands-on support that elders receive, but emotional ties and social exchanges can still be maintained for elders' psychological well-being. Based on these general findings, the specific behavioral and emotional dimensions of intergenerational relationships and elders' life satisfaction will be introduced in the following.

a) Associational solidarity

One of the common questions that is of concern regarding family relationships is how often family members contact each other. As Mancini and Blieszner (1989) pointed out, sociologists have always been concerned with the degree to which children and parents see each other, speak on the phone and correspond. In the intergenerational

solidarity model (Bengtson & Schrader, 1981), the associational solidarity serves as a measurement of family relationships in the behavioral aspect, for it focuses on examining the frequency and types of contact between family members (Lowenstein et al., 2001).

As noted in previous literature, geographic proximity, number of family members, health condition, gender, and the proximity of family members to each other are found to be the predictors of associational solidarity (Adams, 1968; Lawton, Silverstein & Bengtson, 1994). Among these predictors, the proximity of family members to each other is strongly related to associational solidarity (Shanas et al., 1968). Additionally, research reveals that gender is another noticeable factor relating to associational solidarity: the frequency of contact tends to be greater between mothers and children than the interrelations between fathers and children (Lawton et al., 1994; Lowenstein et al., 2001). Marital status and education also have been found to have an influence on associational solidarity. Cooney's study discovered that parental divorce may predict reduced intergenerational contact between fathers and children (1994). On the contrary, widowhood is often associated with more contact between family members (Anderson, 1984). This finding was supported by Roan and Raley (1996), who also found a positive relationship between parental widowhood and frequency of contact with children, particularly for mothers. As for the educational factor, Crimmins and Ingegneri (1990) once reported that a divorced parent who is highly educated and living in an urban area tends to contact his/her adult children less frequently. Lawton et al. (1994) also found that the higher the education level, the lower the likelihood of contact between adult children and mothers.

Moreover, some scholars have questioned whether urbanization, industrialization, and geographic mobility have weakened family cohesion because of the reduced opportunities of contact between adult children and their aged parents (Cohler & Hagestad, 1987b; Shanas, 1979). However, most of the existing studies have not found supporting evidence for this assumption. For instance, Bawin-Legros and Stassen (2002) found a negative relationship between associational solidarity and geographic distance between parents and their children. This finding is in alignment with Daatland and Lowenstein's study (2005), who suggested that associational solidarity between parents and children was remarkably stable across time and space. They further explained that daily contact between parents and adult children is relatively less frequent than 40 years ago because of the lower rates of co-residence, but the available communicational technologies (e.g. telephone, e-mail, etc.) today may compensate for the geographic distance between parents and children.

b) Affectual solidarity

Different from associational solidarity, affectual solidarity is concerned with the closeness between family members (Lawton, Silverstein, & Bengtson, 1994). A harmonious intergenerational family relationship was found to be strongly related to life satisfaction for both young and old generations (Lowenstein & Katz, 2005). Some scholars argued that affectual bonds between children and parents fluctuate during the course of their lives: affectual solidarity rates were high before and after adolescence (Rossi & Rossi, 1990). On the contrary, Lowenstein and Katz (2005) stated that "familial resources, especially emotional bonds, usually remain stable during the life course" (p. 761). Despite whether affectual solidarity changes during the life course, the

existing literature seems to agree upon the positive relationship between affectual solidarity and its importance to elders. Moreover, they pointed out that affectual solidarity was more important to the older generation than the younger generation because the older generation places a great emphasis on intergenerational continuity while the younger generation emphasizes intergenerational autonomy. In addition, research found that affectual solidarity may prolong the lives of elder parents who had encountered personal loss and also significantly buffer the negative impact of widowhood (Silverstein & Bengtson, 1991).

Some of the factors associated with affectual solidarity include marital status, socio-economic condition, geographic distance, and gender (Lowenstein et al., 2001, Lawton et al., 1994). Divorce in old age may weaken affection in families (Lowenstein et al., 2001). In Lawton and colleagues' study (1994), they found that children tend to have closer affectual relationships with their mothers while having somewhat distant relationships with fathers, especially fathers who are no longer married. Lawton et al. (1994) also reported that the marital status does not have significant differences in the emotional bonds between adult children and mothers. In summary, a harmonious and warm intergenerational family relationship over time increases affectual and behavioral exchanges between parents and children, and thus enhances elders' life satisfaction (Parrott & Bengtson, 1999).

# CHAPTER FOUR

# RESEARCH OBJECTIVES AND HYPOTHESIS

The objective of this study is to explore the intergenerational solidarity patterns in China with a specific attention paid to intergenerational solidarity between parents and adult children and how it affects general perceived life satisfaction among Chinese elders. Previous literature reveals that age, gender, marital status, economic status, living arrangement and family relationship are associated with life satisfaction among older persons. To examine how these factors influence intergenerational solidarity and life satisfaction, three research questions are raised: 1) What factors (e.g. individual, familial, socio-economic) are associated with the levels of intergenerational solidarity? 2) What factors (e.g. individual, familial, and socio-economic) are related to the levels of life satisfaction among Chinese elders? 3) Are levels of intergenerational solidarity (from children to parents) associated with life satisfaction when other factors are controlled for? 4) Are levels of intergenerational solidarity (from parents to children) associated with life satisfaction when other factors are controlled for? Based on the research objectives and findings in earlier studies, four groups of hypotheses are proposed for testing in this study:

**Hypothesis I: Levels of intergenerational solidarity are associated with personal, familial, and socio-economic factors.**

I A) There are gender, marital status, and living arrangement differences in affectual solidarity among Chinese elders and their children.

1) *There is a gender difference in affectual solidarity. Mothers have stronger affectual solidarity with children than fathers.*

2) *Marital status has an impact on affectual solidarity. Married elders are more likely to report stronger affectual solidarity with their children than elders who are widowed or divorced.*
3) *Living arrangements affect affectual solidarity among Chinese elders. Elders who have children living together or living nearby report stronger affectual solidarity compared to elders whose children live far away.*

I B) There are gender, marital status, and residential differences in associational solidarity among Chinese elders and their children.

1) *Gender has an impact on associational solidarity. Mothers report stronger associational solidarity with children than fathers.*
2) *There is a marital status difference in associational solidarity. Married elders report stronger associational solidarity with their adult children than divorced elders. Widowed mothers report stronger associational solidarity than widowed fathers.*
3) *There is a residential difference in associational solidarity. Elders who have children living together or living nearby report stronger associational solidarity compared to elders whose children live far away.*

I C) The functional solidarity (financial aspect) is associated with socio-economic factors, number of children and affectual solidarity.

1) *Elders who do not have pension or medical insurance receive more financial support from their children.*
2) *The more children an elder has, the more financial support he/she will receive.*

3) *The stronger affectual solidarity between elders and their children, the more financial support elders receive from their children.*

**Hypothesis II: The levels of life satisfaction among Chinese elders are associated with personal, familial, and socio-economic factors.**

A) There is a gender difference in life satisfaction among Chinese elders. Compared with female elders, male elders express higher levels of life satisfaction.

B) Elders with better health conditions report higher levels of life satisfaction.

C) Married elders report higher levels of life satisfaction than divorced, widowed, or never married elders.

D) Elders who have pension report higher levels of life satisfaction.

**Hypothesis III: The level of intergenerational solidarity (from children to parents) is correlated with levels of life satisfaction among Chinese elders.**

A) Elders who have children living together or living nearby express higher levels of life satisfaction (structural solidarity).

B) The stronger the affectual solidarity (receiving presents, closeness), the higher levels of life satisfaction Chinese elders report.

C) The stronger the associational solidarity (phone call, visit), the higher the levels of life satisfaction that Chinese elders report.

D) The stronger the functional solidarity (financial support), the higher the levels of life satisfaction that Chinese elders report.

**Hypothesis IV: The level of intergenerational solidarity (from parents to children) is correlated with levels of life satisfaction among Chinese elders.**

A) Elders who have children living together or living nearby express higher levels of life satisfaction (structural solidarity)

B) The level of affectual solidarity is positively related to the levels of Chinese elders' life satisfaction.

C) The level of associational solidarity is positively related to the levels of Chinese elders' life satisfaction.

D) There is a positive correlation between functional solidarity, and the levels of life satisfaction: the greater functional solidarity, the greater life satisfaction.

# CHAPTER FIVE

# METHODS

## Setting and sample

The data used in this study were derived from the Zhenjiang City Intergenerational Relationship Survey (ZJIRS) in 2007 carried out by the Zhenjiang Population and Family Planning Committee. Zhenjiang city is a middle sized city in Jiangsu province, China. It includes 7 counties with a proximately 3 million people in 2007. This survey initially recruited 2000 residents from the 7 counties and eventually received 1612 completed questionnaires. Participants were asked to fill out a comprehensive questionnaire including questions of demographic variables, living arrangement, economic condition, health status, social activity, health services, family relationship, spouse relationship, parent-child relationship, attitudes toward aging, social support network and etc. In order to have a comprehensive understanding of aging related issues, the survey recruited participants relatively equally from different gender and age groups (18 to 39, 40 to 59, 60 above). Among the total number of 1612 participants, there were 781 males (48.4%) and 831 females (51.6%). Respondents aged 29 and under account for 12.9 % among the total number, 30 to 39, 22.3%; 40 to 49, 18.6%; 50 to 59, 13.8%; 60 to 69, 22.5%; 70 and above, 9.9%. This study only includes participants aged 55 and above because age 55 is the retirement age in China (Ministry of Human Resources and Social Security of the People's Republic of China, 1999).

**Measures**

In this study, I included demographic variables, living arrangements, intergenerational relationship and some socio-economic variables to examine the correlation between intergenerational solidarity and Chinese elders' life satisfaction. The following table showed the categories and codes of variables.

Table 5.1 Categories and Codes of Variables

| Variable | Variable codes |
|---|---|
| **Life satisfaction** | 1=not satisfied, 2=normal or hard to tell, 3=somewhat satisfied, 4=satisfied |
| ***Demographic variables*** | |
| Age | Age ≥55 |
| Gender | 0=male, 1=female |
| Marital status | 0=other, 1=married |
| Educational Background | 1=illiteracy or almost illiteracy, 2=primary school, 3=middle school, 4=high school, 5=occupational school, 6=college and above |
| Number of children | 1=one child, 2=two children, 3=three children, 4=four children, 5=five children |
| Self-rated health | 1=poor, 2=fair, 3=good, 4=very good |
| ***Socioeconomic Status*** | |
| Pension | 0=no pension, 1=pension |
| Medical insurance | 0= no medical insurance, 1=medical insurance |
| ***Intergenerational Solidarity*** | |
| Frequency of providing financial support (from parents to children) | 1=no, 2=not frequent,3=fairly frequent, 4=highly frequent |
| Frequency of providing financial support (from children to parents) | 1=no, 2=not frequent,3=fairly frequent, 4=highly frequent |
| Frequency of phone call (from parents to children) | 1=rarely, 2=sometimes, 3=often |
| Frequency of phone call (from children to parents) | 1=rarely, 2=sometimes, 3=often |
| Frequency of visit (from parents to children) | 1=rarely, 2=sometimes, 3=often |

| Variable | Variable codes |
|---|---|
| Frequency of visit (from children to parents) | 1=rarely, 2=sometimes, 3=often |
| Frequency of giving either greetings or presents (from parents to children) | 1=rarely, 2=sometimes, 3=often |
| Frequency of giving either greetings or presents (from children to parents) | 1=rarely, 2=sometimes, 3=often |
| Self-rated family relationship | 1=bad or unclear, 2=intimate, 3=very intimate |

*Dependent variable:* There are two major conceptually different dependent variables: intergenerational solidarity and life satisfaction. Because intergenerational solidarity was measured in 3 dimensions, they became 3 separate dependent variables in data analysis, they are: associational, affectual, and functional intergenerational solidarity. The other conceptually different dependent variable in this study is the life satisfaction. Participants were asked to estimate their general perceived life satisfaction on a 5-point scale, with 'satisfied' as 1 and 'not satisfied' as 5. This scale was re-coded into a four-point scale, with 1= not satisfied, 2=normal or hard to say, 3= somewhat satisfied, and 4=satisfied.

*Independent variables:* Independent variables include demographic variables, socio-economic status, living arrangements, and intergenerational relations. Among demographic variables, age was measured by chronological years since birth. Gender and marital status were both coded as dichotomous variables, female=1, male=0, and married=1, others=0. Educational level was coded as a six-point scale ranging from 0= illiteracy or almost illiteracy to 5=college educational level and above. Health condition was a one item question, "Generally speaking, how you rate your current health status?"

The response scale ranged from 1= poor to 4= very good. Number of children was coded as a five-point scale ranging from 1=one child to 5=five children. The current study did not exclude elders who did not have any children for two reasons. First, among the 628 elderly respondents, only 1.1% (N=7) of them have no children. Secondly, when using cross-tabulation of whether or not having children (dummy coded) with each of the associational solidarity measures (phone call and visit); the data revealed that 2 out of 7 of the childless elders actually answered questions in the intergenerational relationship sections. These answers may suggest that childless elders may have either adopted children or treated nephews and nieces as their own children. For these two reasons, the current study did not leave out those who reported as childless.

Two variables measuring socioeconomic characteristics are included: pension and medical insurance. Pension status was measured by the question, “Do you have a pension?” with dummy coded answers: 1= have pension, and 0= no pension. The medical insurance variable was dummy coded as 1=have medical insurance, 0=no medical insurance.

Intergenerational solidarity was measured using the following variables: living arrangement (structural solidarity), frequency of children’s contacts (associational solidarity), closeness between parents and children (receiving presents and closeness, affectual solidarity), and frequency of financial support (functional solidarity). Living arrangement was dummy-coded: having children live together or nearby and all children live far away or having no children. The criterion of all children living far away includes living in different counties, cities or provinces, which require at least 2 hours or more to travel. Children (or parents)’s contact with parents (or children) was measured by the

frequency of children's visits and phone call. Each item was a three-point scale starting from 1= rarely, 2=sometimes, 3=often. Since the respondents in current study were not paired, the intergenerational solidarity questions were answered by parents only. Questions about the frequency of phone call were "How often do you make phone calls to your children" and "How often do your children call you?" Closeness between parents and children was measured by two questions as well: "Do you receive presents on your birthday, anniversary or other important holidays from your children" and "How close you are in relation to your children?" The two questions were both measured by a three-point response set. Functional solidarity was measured by the frequency of providing financial support from children (parents). This question was a four-point scale starting from 1=no, 2= not frequent, 3=fairly frequent, 4=highly frequent.

**Data Analysis**

Data analysis started with general descriptive statistic establishing the mean, the range, minimum and maximum of independent and dependent variables in the study. In the second step, zero-order correlation analysis was performed to understand the correlations among all independent and dependent variables when no other variables were controlled for. In this process, I was able to identify variables that may have high correlation. When correlation between two variables was above .70, I chose one of the two variables to avoid high colinearity in further analysis. In current study, there were no variables having high colinearity above.70. In the third step, I conducted multi-nominal regression analysis using intergenerational solidarity measures as dependent variables (associational, affectual, and functional), individual, familial, and socio-economic factors as independent variables to understand major factors associated with intergenerational

solidarity. In the fourth step, I conducted another multi-nominal regression analysis on life satisfaction, using individual, familial, and socio-economic factors as independent variables. In the final step, I entered each of the four measures of intergenerational solidarity into the model of life satisfaction regression analysis to understand whether each dimension of intergenerational solidarity from both parents' and children's perspectives has a separate impact on the measure of elders' report of life satisfaction.

# CHAPTER SIX

# RESULTS

This chapter presents findings that focus on two aspects of intergenerational relations and answers the questions: 1) What are the major factors that influence intergenerational solidarity? And 2) Does intergenerational solidarity measures influence older adults' report of life satisfaction? To understand the general characteristics of the sample and the bi-variant correlation between all variables, descriptive statistics and a zero-order correlation analysis are presented first. Then using 4 dimensions of intergenerational solidarity measures as dependent variables, four different multi-nominal regression analyses were performed to understand major factors that influence intergenerational solidarity. Finally, to understand the impact of intergenerational solidarity on elders' life satisfaction, four different regression analyses were performed to examine how each dimension of intergenerational solidarity influences elders' life satisfaction.

## Descriptive statistics

Table 6-1 presents descriptive statistics for the dependent variables and all independent variables for the regression model of Chinese elders' life satisfaction. On a 4-point scale, the mean score of life satisfaction among the elderly respondents was 3.11. Only a few elders (4.2%) perceived their lives as "not satisfied"; 19.8% of elders perceived life as "normal or hard to tell"; the majority of the elderly respondents considered their lives as "somewhat satisfied" (36.5%) and "satisfied" (39.5%).

The demographic backgrounds of the elders were also shown in Table 6-1. The total number of respondents for this study was 628, among them, 49.4% were male, 50.6% female. The vast majorities (88.2%) were under age 75; their mean age was 65.6 years.

Seventy-eight point eight percent of the same was married; those who were divorced, widowed, separated were included as one group, which makes up 21.3%. Most elders (81.8%) had less than middle school education. The majority of elderly respondents (81.5%) had 2 or more children. As for the financial aspect, a little over 1 in 4 (26.9%) elderly respondents reported having no pension while others (73.1%) had a pension, and most elders had a medical insurance (87%). The majority (42.1%) of respondents considered their health condition as "good"; few elders (7.0%) scored their health as "poor"; 17.2% of elders considered their health status as "very good." As regard to elderly respondents' living arrangements, the vast majority (83.1%) of the elders have at least one child living together or nearby.

Given that intergenerational solidarity is concerned central focus of this study, the measurements of intergenerational relationships also are provided in the Table 6-1. As for the financial side of family support, roughly 42 % of elderly respondents received "fairly frequent" financial assistance from their adult children. On the other hand, a similar percentage of elders (41.1%) reported that they did not provide financial support to their children; only 18.3% of elders provided "fairly frequent" financial support to their children. About 60% elderly respondents reported having visits from children as "often" while lower numbers of elders reported visiting their children "sometimes" (46%) and "often" (45%). With regard to the frequency of phone calls, the majority (60%) reported children called them "often"; but only half (51%) of them considered their phone call to their children as "often". The data revealed that the missing values were high in variables of associational solidarity (phone call and visit). The high missing values may caused by the high percentage of co-residence (nearly 43%) as well as high

percentage of having children living nearby (40.5%). In order to see the impact of having no children living together or nearby on intergenerational solidarity and life satisfaction, these two categories were lumped together. It is quite likely that elders who have at least one child live together or nearby do not feel the need for frequent visit and phone call from the child.

About 38% of elders reported receiving either greetings or presents from their children on important holidays as “sometimes”; large numbers of elders (43%) do not give either greetings or presents to their children on holidays and anniversaries. More than two-thirds (75.4%) of elderly respondents considered their relationships with their adult children as “intimate”, nearly 25% of elders reported “bad or unclear” relationships with family members.

Table 6-1: Characteristics of the Respondents (N=628)

| Variables | | Frequency | Valid Percent | Mean | St. deviation |
|---|---|---|---|---|---|
| Age | 56-174 | 322 | 51.3 | 65.60 | 6.923 |
| | 66-184 | 232 | 36.9 | | |
| | 75 and above | 74 | 11.8 | | |
| | missing | 0 | | | |
| Gender | male | 310 | 49.4 | .51 | .500 |
| | female | 318 | 50.6 | | |
| | missing | 0 | | | |
| Marital Status | married | 492 | 78.7 | .79 | .410 |
| | other | 133 | 21.3 | | |
| | missing | 3 | | | |

Table 6-1: Characteristics of the Respondents (N=628)

| Variable | | Frequency | Valid percent | Mean | St. deviation |
|---|---|---|---|---|---|
| Educational background | illiteracy or almost illiteracy | 134 | 21.8 | 2.50 | 1.142 |
| | primary school | 188 | 30.5 | | |
| | middle school | 182 | 29.5 | | |
| | high school | 82 | 13.3 | | |
| | occupational school | 24 | 3.9 | | |
| | college and above | 6 | 1.0 | | |
| | missing | 12 | | | |
| Number of children | one | 100 | 15.9 | 2.53 | 1.196 |
| | two | 216 | 34.4 | | |
| | three | 176 | 28.0 | | |
| | four | 69 | 11.0 | | |
| | five | 51 | 8.1 | | |
| | missing | 16 | | | |
| Pension | no pension | 119 | 26.9 | .73 | .444 |
| | pension | 323 | 73.1 | | |
| | missing | 186 | | | |
| Medical insurance | no insurance | 77 | 12.7 | .87 | .333 |
| | have insurance | 530 | 87.3 | | |
| | missing | 21 | | | |
| Self-rated health | Poor | 38 | 7.0 | 2.69 | .835 |
| | Fair | 183 | 33.8 | | |
| | good | 228 | 42.1 | | |
| | very good | 93 | 17.2 | | |
| | missing | 86 | | | |
| Elders' living arrangement | all children live far away | 86 | 13.7 | .86 | .349 |
| | children live together or nearby | 522 | 83.1 | | |
| | missing | 20 | | | |

Table 6-1: Characteristics of the Respondents (N=628)

| Variable | | Frequency | Valid percent | Mean | St. deviation |
|---|---|---|---|---|---|
| Life satisfaction | not satisfied | 26 | 4.2 | 3.11 | .866 |
| | normal or hard to say | 126 | 19.8 | | |
| | somewhat satisfied | 226 | 36.5 | | |
| | satisfied | 245 | 39.5 | | |
| | missing | 8 | | | |
| Frequency of financial support from children | No support | 127 | 24.3 | 2.44 | .999 |
| | Not frequent | 106 | 20.3 | | |
| | Fairly frequent | 220 | 42.1 | | |
| | Highly frequent | 69 | 13.2 | | |
| | Missing | 106 | | | |
| Frequency of financial support from parents | No support | 258 | 41.1 | 1.53 | 1.21 |
| | Not frequent | 85 | 13.5 | | |
| | Fairly frequent | 115 | 18.3 | | |
| | Highly frequent | 47 | 7.5 | | |
| | Missing | 123 | | | |
| Frequency of visit from children | Rarely | 36 | 11.8 | 2.49 | .698 |
| | Sometimes | 85 | 27.8 | | |
| | Often | 185 | 60.5 | | |
| | Missing | 322 | | | |
| Frequency of visit from parents | Rarely | 23 | 7.7 | 2.38 | .624 |
| | Sometimes | 140 | 46.8 | | |
| | Often | 136 | 45.5 | | |
| | Missing | 329 | | | |
| Frequency of phone call from children | Rarely | 44 | 14.8 | 2.46 | .739 |
| | Sometimes | 72 | 24.2 | | |
| | Often | 181 | 60.9 | | |
| | Missing | 331 | | | |
| Frequency of phone call from parents | Rarely | 75 | 25.0 | 2.26 | .834 |
| | Sometimes | 72 | 24.0 | | |
| | Often | 153 | 51.0 | | |
| | Missing | 328 | | | |

Table 6-1: Characteristics of the Respondents (N=628)

| Variable | | Frequency | Valid percent | Mean | St.deviation |
|---|---|---|---|---|---|
| Frequency of giving either greetings or presents from children | Rarely | 206 | 33.7 | 1.94 | .785 |
| | Sometimes | 233 | 38.1 | | |
| | Often | 172 | 28.2 | | |
| | Missing | 17 | | | |
| Frequency of giving either greetings or presents from parents | Rarely | 190 | 43.4 | 1.79 | .788 |
| | Sometimes | 148 | 33.8 | | |
| | Often | 100 | 22.8 | | |
| | Missing | 190 | | | |
| Self-rated family relationship | Bad or unclear | 117 | 24.6 | 1.09 | .805 |
| | Intimate | 193 | 40.5 | | |
| | Very intimate | 166 | 34.9 | | |
| | Missing | 152 | | | |

**Zero-order Correlation Analysis**

Zero-order correlation analysis ($p<.05$ required) was used in this study for the purpose of understanding the relationship between each independent variable and dependent variable without controlling for other variables. The results are shown in Table 6-2 below.

Given that the study contains two groups of dependent variables (intergenerational solidarity and elders' life satisfaction); the description of the first group of dependent variable (intergenerational solidarity) is presented first. When no other variables were controlled for, elder's self-rated family relationship had a positive correlation with gender, self-rated health, educational background, pension, medical insurance and variables of both associational solidarity and affectual solidarity. Analysis showed that elders who have at least one child living together or nearby had a negative correlation with the self-rated family relationship. The frequency of "giving either greetings or presents from children" was positively correlated with elders' self-rated

health, pension, the frequency of visit from parents, and giving greetings or presents for children. This variable also had a negative correlation with elders' living arrangement—elders who live with children or have at least one child live nearby were less likely to receive greetings or presents from children. The dependent variable—"frequency of giving either greetings or presents from parents to children" had positive correlation with elders' marital status, educational background, pension, medical insurance and variables of associational solidarity. The frequency of giving either greetings or presents from parents to children had negative relation with elders' living arrangement and number of children. Furthermore, without controlling for other variables, the frequency of phone call from parents and children were found to correlate positively with elders' marital status, self-rated health, pension, and the frequency of providing financial support from parents to children, frequency of visit from parents and children, self-rated family relationship and the frequency of giving either greetings or presents from parents. On the other hand, the frequency of phone calls from parents to children had negative relationship with age, living arrangement, and number of children. The zero-order analysis revealed that the frequency of phone call from children to parents had positive correlation with elders' marital status, educational background, self-rated health status, pension and almost all the variables of intergenerational solidarity except for the frequency of providing financial support from children and giving either greetings or presents from children. The frequency of phone call from parents to children had negative relation with elders' age, living arrangement, and number of children. Moreover, the frequency of visit from parents to children had positive relationship with all other variables of intergenerational solidarity except for variables of functional solidarity (frequency of providing financial

support), as well as elders' marital status, educational background, self-rated health, and pension. The analysis revealed that elders' age and living arrangement had a negative correlation with the frequency of visit from parents to children. In addition, the frequency of visit from children to parents also had a positive relationship with other solidarity variables, except for the frequency of giving either greetings or presents from children to parents and providing financial support from parents. The frequency of visit from children to parent had a positive relationship with two independent variables—marital status, and pension. The frequency of providing financial support from parents to children was found to have a positive relation with the frequency of phone calls (from both parents and children), elders' marital status, educational background, self-rated health, and pension. Elders' age had a weak negative relation (r= -.121) with the frequency of providing financial support from parents to children. The frequency of providing financial support from children to parents was positively related with the frequency of visit from children to parents, gender, living arrangement and number of children. Elders' educational background, pension, and medical insurance had a negative correlation with the dependent variable—the frequency of providing financial support from children to parents.

As shown in Table 6-2, when no other variables were controlled for, certain independent variables had correlation with the main dependent variable, elders' life satisfaction. As can be seen, all intergenerational solidarity variables had a positive relationship with elders' life satisfaction, except for the variable of "financial support from parents." Elders' age had a negative relation (r=-.104) with the dependent variable at a .05 significance level. Married elders had a higher probability of expressing higher

levels of life satisfaction. Elders' educational background had a positive relation (r=.133) with the dependent variable at a.01 significance level. In other words, elders with higher levels of education were more likely to have higher levels of life satisfaction. In addition, elders' self-rated health also had a positive correlation (.314) with the dependent variable at a .01 significance level. Elders who had a better self-rated health were more likely to have higher levels of life satisfaction. Meanwhile, having medical insurance had a relatively weak positive relation (r=.098) with the dependent variable at a.05 significance level.

Table 6-2: Bivariate Correlations of All Variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | | | | | | | | | | | | | | | | | |
| 2 | .324*** | 1 | | | | | | | | | | | | | | | | | |
| 3 | .117* | .175** | 1 | | | | | | | | | | | | | | | | |
| 4 | .177*** | .158** | .441** | 1 | | | | | | | | | | | | | | | |
| 5 | .362*** | .327*** | .125 | .282*** | 1 | | | | | | | | | | | | | | |
| 6 | .358*** | .345*** | .065 | .245** | .619*** | 1 | | | | | | | | | | | | | |
| 7 | .290*** | .260*** | .171* | .220*** | .525*** | .326** | 1 | | | | | | | | | | | | |
| 8 | .389*** | .321*** | .018 | .183** | .351*** | .511*** | .443*** | 1 | | | | | | | | | | | |
| 9 | .045 | -.004 | -.015 | .079 | .156** | .121* | .040 | .061 | 1 | | | | | | | | | | |
| 10 | .135** | .062 | .042 | -.040 | .031 | .008 | .023 | .140* | -.078 | 1 | | | | | | | | | |
| 11 | -.104* | -.085 | .029 | -.182*** | -.215*** | -.207*** | -.126* | -.101 | -.121** | .083 | 1 | | | | | | | | |
| 12 | -.037 | .103* | .010 | .035 | -.028 | .050 | .032 | .041 | -.061 | .087* | .041 | 1 | | | | | | | |
| 13 | .195*** | .099* | -.006 | .082* | .194** | .175** | .116* | .131* | .120** | -.059 | -.316*** | -.175*** | 1 | | | | | | |
| 14 | .133** | .133** | .066 | .269*** | .374*** | .233*** | .195** | .102 | .191** | -.098* | -.239*** | -.300*** | .238*** | 1 | | | | | |
| 15 | .314** | .131** | .115* | .076 | .220** | .157* | .211** | .080 | .092* | .011 | -.072 | -.203** | .034 | .105* | 1 | | | | |
| 16 | .065 | .109* | .112* | .269** | .335** | .282** | .204** | .186** | .213** | -.239** | -.059 | -.166** | .098** | .497** | .147** | 1 | | | |
| 17 | .098* | .008 | -.066 | .090* | .035 | .026 | -.055 | .007 | .064 | -.119** | -.060 | -.092* | .055 | .158*** | .026 | .271** | 1 | | |
| 18 | .047 | .-.119** | -.119** | -.231** | -.181** | -.211** | -.145* | -.027 | .066 | .173** | -.042 | .023 | -.023 | -.233** | -.018 | -.245* | -.009 | 1 | |
| 19 | .075 | -.032 | -.094* | -.133** | -.214** | -.172** | -.058 | -.051 | -.036 | .192*** | .384*** | .110** | -.172*** | -.229*** | -.054 | -.233* | -.059 | .251** | 1 |

1-life satisfaction; 2-self-rated family relationship; 3-greetings/presents for parents; 4-greetings/presents for children; 5 phone call from parents; 6 phone call from children; 7-visit from parents; 8-visit from children; 9-financial support from parents; 10-financil support from children; 11-age; 12-gender; 13-marital status; 14-education background; 15-self-rated health status; 16-pension; 17-medical insurance; 18-living arrangement, 19-number of children.

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

**The Intergenerational Solidarity Models**

In this section, multi-nominal logistic regression analysis was employed to exam the correlation between the background independent variables (e.g., age, gender, marital status, and etc.) and each dimension of intergenerational solidarity. Regression results were shown in the following tables (Table 6-3 to Table 6-11).

A) Associational Solidarity

Table 6-3: Multi-nominal Regression Analysis for the Frequency of Phone Call (from parents to children)

| Independent variable | Frequency of phone call (from parents to children) | | | |
|---|---|---|---|---|
| | Rarely or few times | | Sometimes | |
| | B | Exp (B) | B | Exp (B) |
| Age | .229 | 1.257 | -.097 | .908 |
| Gender (Female) | .556 | 1.744 | .340 | 1.405 |
| Marital status (Married) | .924* | 2.520 | .376 | 1.456 |
| Educational background | -.721** | .486 | -.131 | .877 |
| The number of children | -.038 | .963 | -.103 | .903 |
| Pension (Have) | 1.127* | 3.086 | .841* | 2.318 |
| Medical insurance (Have) | -.457 | .633 | -.110 | .896 |
| Self-rated health | -.554** | .575 | -.410* | .664 |
| Living arrangement | -.248 | .780 | -.861 | .423 |

a. The reference category is: often.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

<u>Frequency of phone call (from parents to children)</u>

As shown in Table 6-3, marital status, elders' educational background, pension, and self-rated health were related to the frequency of phone call (from parents to children). Elders who were married were more likely to report the frequency of phone call as "rarely or few times" (Odds Ratio (OR) =.924) in reference to the "often." Chinese elders who have higher levels of education were less likely to report "rarely or few times" (OR=-.72) regarding how often they call their children. The possession of pension was positively related to the frequency of phone calls. For one standard deviation (.444) increase in pension, the probability that Chinese elders

reported “rarely or few times” increased by nearly 2.09 times; the probability that elders reported “sometimes” increased by 1.32 times. Results in Table 6-3 also demonstrated that for one standard deviation (.835) increase in self-rated health, the probability of elders reporting “rarely or few times” of making phone call decreased 42.5%, and the probability of Chinese elders reporting “sometimes” decreased 33.6%.

Table 6-4: Multi-nominal Regression Analysis for the Frequency of Phone Call (from children to parents)

| Independent variable | Frequency of phone call (from children to parents) | | | |
|---|---|---|---|---|
| | Rarely or few times | | Sometimes | |
| | B | Exp (B) | B | Exp (B) |
| Age | -.526 | .591 | -.421 | .656 |
| Gender (Female) | .959* | 2.609 | .192 | 1.212 |
| Marital status (Married) | 1.528** | 4.609 | .593 | 1.810 |
| Educational background | -.443 | .642 | .019 | 1.019 |
| The number of children | .116 | 1.123 | -.075 | .928 |
| Pension (Have) | 1.518* | 4.561 | .843* | 2.324 |
| Medical insurance (Have) | -.547 | .579 | -.133 | .876 |
| Self-rated health | -.363 | .695 | -.290 | .748 |
| Living arrangement | -.269 | 1.309 | -.578 | .561 |

a. The reference category is: often.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of phone call (from children to parents)

In Table 6-4, gender, marital status, and pension were associated with the frequency of phone call (from children to parents). Women and married elders were more likely to report “rarely or few times” of receiving phone call from their children when compared to the “often” group. For one standard deviation (.444) increases in elders’ pension, the probability of the elders reporting “rarely or few times” increased 356%, and the probability of the elders reporting “sometimes” increased nearly 132%.

Table 6-5: Multi-nominal Regression Analysis for the Frequency of Visit (from parents to children)

| Independent variable | Frequency of visit (from parents to children) | | | |
|---|---|---|---|---|
| | Rarely or few times | | Often | |
| | B | Exp (B) | B | Exp (B) |
| Age | .410 | 1.507 | .613 | 1.845 |
| Gender (Female) | .846 | 2.331 | -.892* | .410 |
| Marital status (Married) | -.046 | .955 | .593 | 1.810 |
| Educational background | -.859** | .424 | .003 | 1.003 |
| The number of children | -.077 | .926 | .110 | 1.116 |
| Pension (Have) | -.006 | .994 | -1.000** | .368 |
| Medical insurance (Have) | .322 | 1.379 | .957* | 2.605 |
| Self-rated health | -.062 | .940 | .513** | 1.670 |
| Living arrangement | .717 | 2.049 | .216 | 1.242 |

a. The reference category is: sometimes.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of visit (from parents to children)

Results in Table 6-5 demonstrated that gender, educational background, pension, and self-rated health were correlated with the frequency of visit (from parents to children). Men, compared to women, were more likely to report the frequency of visit as “often” compared to female counterparts (OR=.89). Moreover, elders who have higher levels of education were less likely to report “rarely or few times” of visit (OR=-.86) in reference to “sometimes”. As shown, elders who have a pension, better self-rated health, and children nearby or at least one child living together, were more likely to report visiting their children “often”.

Table 6-6: B and Exp (B) in the Multi-nominal Regression Analysis for the Frequency of Visit (from children to parents)

| Independent variable | Frequency of visit (from children to parents) | | | |
|---|---|---|---|---|
| | Rarely or few times | | Sometimes | |
| | B | Exp (B) | B | Exp (B) |
| Age | -.780 | .458 | .498 | .608 |
| Gender (Female) | .754 | 2.126 | -.037 | 1.038 |
| Marital status (Married) | 1.078* | 2.938 | .794 | 2.212 |
| Educational background | -.417 | .659 | .476** | 1.609 |
| The number of children | -.073 | .930 | -.189 | .828 |

| | | | | |
|---|---|---|---|---|
| Pension (Have) | -.706 | 2.026 | 1.578*** | 4.844 |
| Medical insurance (Have) | -.027 | .973 | -.685 | .504 |
| Self-rated health | -.041 | .960 | -.198 | .820 |
| Living arrangement | .953 | 2.593 | -.516 | .597 |

a. The reference category is: often.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of visit (from children to parents)

According to Table 6-6, marital status, elders' educational background, and pension had a statistically significant relationship with the dependent variable (frequency of visit from children to parents). In reference to those who reported children visit "often", married elders were nearly two times more likely (Exp B=2.9) to report "rarely or few times." Additionally, elders who have a pension and higher levels of education were more likely to rate visits from their children as "sometimes."

B) Affectual Solidarity

Table 6-7: Multi-nominal Regression Analysis for the Frequency of Giving Either greetings or presents on Anniversaries or other Important Holidays (from parents to children)

| Independent variable | Frequency of preparing presents (from parents to children) | | | |
|---|---|---|---|---|
| | Rarely or few times | | Often | |
| | B | Exp (B) | B | Exp (B) |
| Age | .429 | 1.536 | 1.265* | 3.544 |
| Gender (Female) | .089 | 1.093 | -.163 | .850 |
| Marital status (Married) | -.223 | .800 | .265 | 1.304 |
| Educational background | -.203 | .816 | -.181 | .834 |
| The number of children | .178 | 1.195 | -.007 | .993 |
| Pension (Have) | .257 | 1.294 | -.013 | .987 |
| Medical insurance (Have) | -.823** | .439 | -.165 | .848 |
| Self-rated health | .070 | 1.073 | .457* | 1.579 |
| Living arrangement | -1.160 | .313 | .792 | 2.208 |

a. The reference category is: sometimes.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of giving either greetings or presents (from parents to children)

Based on result from Table 6-7, the frequency of giving either greetings or presents to adult children on anniversaries or other important holidays had a significant correlation with elders' age, medical insurance, and self-rated health. Elders, who are older and have better self-rated health, were more likely to report "often" compared to the "sometimes" group. Results from this table demonstrated that for one standard deviation (.333) increase in the independent variable—medical insurance, the probability of the frequency of reporting "rarely or few times" in giving either greetings or presents (from parents to children) decreased 56.1%.

Table 6-8: Multi-nominal Regression Analysis for the Frequency of Giving Greetings and Preparing Presents on anniversaries or other Important Holidays (from children to parents)

| Independent variable | Frequency of preparing presents (from children to parents) | | | |
|---|---|---|---|---|
| | Sometimes | | Often | |
| | B | Exp (B) | B | Exp (B) |
| Age | -.183 | .833 | -.276 | .759 |
| Gender (Female) | -.762** | .467 | -.878** | .416 |
| Marital status (Married) | .340 | 1.405 | -.238 | .788 |
| Educational background | .335** | 1.398 | .497*** | 1.643 |
| The number of children | -.057 | .945 | -.041 | .960 |
| Pension (Have) | -.412 | .663 | -.965** | .381 |
| Medical insurance (Have) | -.201 | .818 | -.211 | .809 |
| Self-rated health | .026 | 1.026 | .166 | 1.180 |
| Living arrangement | .092 | 1.096 | .596 | 1.815 |

a. The reference category is: rarely or few times.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of giving either greetings or presents (from parents to children)

As shown in Table 6-8, gender, educational background, and pension were found to be significantly related to the frequency of giving either greetings or presents (from children to parents). In reference to "rarely or few times", men were more likely to report "sometimes" and "often" compared to their female counterparts. For one standard deviation (1.142) increase in elder's educational level, the probability of reporting "sometimes" increased 39.8%; the

probability of reporting “often” increased 64.3%. Results in this table also revealed that the elders without a pension were more likely to report “often” receiving either greetings or presents from their children on their anniversaries or other important holidays.

Table 6-9: B and Exp (B) in the Multi-nominal Regression Analysis for the Self-rated Family Relationship

| Independent variable | Self-rated family relationship | | | |
|---|---|---|---|---|
| | Bad or unclear | | Very intimate | |
| | B | Exp (B) | B | Exp (B) |
| Age | .583 | 1.792 | -.305 | .737 |
| Gender (Female) | .802** | 2.231 | -.199 | .819 |
| Marital status (Married) | 1.013** | 2.753 | .446 | 1.563 |
| Educational background | -.170 | .843 | .138 | 1.148 |
| The number of children | .210 | 1.234 | .241* | 1.273 |
| Pension (Have) | -.219 | .803 | -.194 | .824 |
| Medical insurance (Have) | .076 | 1.079 | .121 | 1.128 |
| Self-rated health | .028 | 1.028 | .522** | 1.686 |
| Living arrangement | -.817 | .442 | .184 | 1.202 |

a. The reference category is: intimate.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Self-rated Family Relationship

According to Table 6-9, elders’ self-rated family relationship was associated with gender, marital status, the number of children, and self-rated health. Results from this table revealed that women and married elders were more likely to report of having “bad or unclear” family relationship in reference to “intimate”. In addition, the number of children was found to have a positive relationship with the dependent variable “very intimate” family relationship when compared to the “intimate” category. What’s more, for one standard deviation (. 835) increase in self-rated health, the probability of him/her reporting “very intimate” increased 68.6%.

C) Functional Solidarity

Table 6-10: Multi-nominal Regression Analysis for the Frequency of Financial support (from parents to children)

| Independent variable | Frequency of financial support (from parents to children) | | | | | |
|---|---|---|---|---|---|---|
| | Not frequent | | Fairly frequent | | Highly frequent | |
| | B | Exp (B) | B | Exp (B) | B | Exp (B) |
| Age | -.065* | .937 | -.051 | .950 | -.020 | .980 |
| Gender (Female) | -.069 | .933 | -.316 | .729 | -.188 | .828 |
| Marital status(Married) | .183 | 1.201 | -.206 | .814 | -.380 | .684 |
| Educational background | .119 | 1.127 | .337* | 1.401 | .258 | 1.294 |
| The number of children | -.131 | .877 | -.109 | .897 | .105 | 1.110 |
| Pension(Have) | -1.155** | .315 | -1.452*** | .234 | -2.290*** | .101 |
| Medical insurance(Have) | -.490 | .613 | .030 | 1.030 | .965 | 2.624 |
| Self-rated health | -.148 | .863 | .126 | 1.134 | .273 | 1.314 |
| Living arrangement | -.174 | .840 | -.772 | .462 | .109 | 1.115 |

a. The reference category is: no.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of financial support (from parents to children)

As shown in the Table 6-10, the frequency of financial support from parents to children was mainly related to elders' age, educational background, and pension. With increased age, elders were less likely to report "not frequent" in providing financial support to their children compared to the reference category "no." In addition, elders with higher levels of education had higher probability of reporting "fairly frequent." Elders with pensions were less likely to report providing infrequent or frequent financial support compared to providing "no financial support" to their children. This finding does not make intuitive sense. Future study is needed for a better explanation.

Table 6-11: Multi-nominal Regression Analysis for the Frequency of Financial support (from children to parents)

| Independent variable | Frequency of financial support (from children to parents) | | | | | |
|---|---|---|---|---|---|---|
| | No | | Not frequent | | Highly frequent | |
| | B | Exp (B) | B | Exp (B) | B | Exp (B) |
| Age | .203 | 1.225 | 1.287 | 3.623 | .016 | 1.016 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Gender (Female) | -.016 | .984 | -.063 | .939 | -.428 | .651 |
| Marital status(Married) | .065 | 1.067 | -.569 | .566 | .184 | 1.202 |
| Educational background | -.242 | .785 | -.377** | .686 | -.073 | .930 |
| The number of children | -.094 | .910 | -.254 | -.132 | .135 | 1.145 |
| Pension(Have) | -1.163*** | .313 | -.460 | .631 | .751 | 2.119 |
| Medical insurance(Have) | -.543 | .581 | -.553 | .575 | -.104 | .901 |
| Self-rated health | -.088 | .916 | -.135 | -.151 | .229 | 1.257 |
| Living arrangement | 1.005** | 2.732 | -.142 | .867 | .401 | 1.494 |

a. The reference category is: fairly frequent.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Frequency of financial support (from children to parents)

Table 6-11 shows that elders' educational background, pension, and living arrangement were significantly co-related with the frequency of financial support (from children to parents). For one standard deviation (1.142) increase in the levels of education, the probability of reporting "not frequent" decreased 31.4%. Those elderly respondents with a pension and at least one child living together or nearby were more likely to report that they do not receive financial assistant from their children.

**Intergenerational Solidarity and Life Satisfaction**

As noted in earlier in the literature review, previous studies have found a correlation between gender, marital status, education, health, and elders' life satisfaction. To understand major factors influencing elders' report of life satisfaction, a multi-nominal regression analysis was performed upon all independent variables included in the analysis of intergenerational solidarity models. As the focus of this study is on intergenerational solidarity, in the second step, four dimensions of intergenerational solidarity (Associational, Affectual, and Functional) were separately entered into the regression model to understand the impact of each dimension on elders' life satisfaction. Findings of these regression analyses are presented below.

***Factors Influencing Life Satisfaction***

Table 6-12: B and Exp (B) in the Multi-nominal Regression Analysis for Chinese elders' life satisfaction

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -.190 | .827 | .471 | 1.601 | -.054 | .947 |
| Gender (Female) | 1.159 | 3.186 | -.061 | 1.063 | .283 | 1.327 |
| Marital status(Married) | 2.375*** | 10.753 | .767* | 2.154 | .514 | 1.672 |
| Educational background | -.737* | .478 | -.406** | .666 | -.056 | .946 |
| The number of children | -.417 | .659 | -.303* | .738 | -.134 | .875 |
| Pension(Have) | .055 | 1.057 | -.484 | .616 | -.477 | .620 |
| Medical insurance(Have) | 1.107 | 3.024 | .382 | 1.466 | .277 | 1.319 |
| Self-rated health | -.1.814*** | .163 | -.968*** | .380 | -.699*** | .497 |
| Living arrangement | .560 | 1.750 | -.425 | .653 | -.024 | .976 |

a. The reference category is: satisfied.
b. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

As Table 6-12 shows, Chinese elders' life satisfaction was correlated with marital status, educational background, number of children, and self-rated health. Married elders were more likely to report "not satisfied" and "normal or hard to tell" with their lives when compared to the reference ("satisfied") category. For every 1.142 (one standard deviation) increase in the levels of education, the probability of reporting "not satisfied" decreased 52.2%, and the probability of reporting "normal or hard to tell" decreased 33.4%. Based on the table, the number of children had a partially negative relationship with elders' life satisfaction. The more children an elder had, s/he was less likely to report "normal or hard to tell" regarding his/her life satisfaction when compared to the reference category. Furthermore, elders' self-rated health was strongly related to their life satisfaction. Compared to the "satisfied" group, for one standard deviation (.835) increase in self-rated health, the probability of reporting "not satisfied" decreased 86.4%; the probability of reporting "normal or hard to tell" decreased 62%, and the probability of reporting

"somewhat satisfied" decreased 50.3%. In other words, the better one's self-rated health, the probability of reporting "satisfied" increased.

I. Associational Solidarity and Life Satisfaction

Table 6-13: B and Exp (B) in the Multi-nominal Regression Analysis for Chinese Elders' Life Satisfaction and the Frequency of Visit from Children (Associational Solidarity Model 1)

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -2.108 | .121 | -.285 | .752 | -.379 | .685 |
| Gender (Female) | 1.477 | 4.380 | .143 | 1.153 | .438 | 1.549 |
| Marital status(Married) | 2.574** | 13.116 | 1.117* | 3.056 | 1.061* | 2.890 |
| Educational background | -.626 | .535 | -.372 | .689 | -.286 | 1.332 |
| The number of children | .330 | 1.392 | -.150 | .861 | .073 | 1.076 |
| Pension(Have) | -.879 | .415 | -.554 | .575 | -.347 | .707 |
| Medical insurance(Have) | .597 | 1.816 | .444 | 1.559 | 1.084* | 2.956 |
| Self-rated health | -1.996** | .136 | -.840** | .432 | -.801*** | .449 |
| Living arrangement | -.036 | .965 | -.756 | .470 | .074 | 1.077 |
| Visit from children Rarely | 3.370** | 29.080 | 2.400** | 11.026 | .991 | 2.694 |
| Visit from children Sometimes | 1.782 | 5.941 | 1.427** | 4.167 | .1.102* | 3.010 |

a. The reference category is: satisfied.
b. The reference category for visit from children is: often. 1=Rarely, 2=Sometimes, 3=Often.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Associational Solidarity Model 1

According to Table 6-13, the background variables of elders' marital status, medical insurance, and self-rated health were related with elders' life satisfaction in this model. In reference to "satisfied", married elders were more likely to report "not satisfied" "normal or hard to tell" and "somewhat satisfied." Elders with a pension had higher probability of reporting being "somewhat satisfied" with their lives. Additionally, self-rated health had a strong negative relationship with all three categories, indicating that elders with better self-rated health had

higher probability of reporting being “satisfied” with their current lives. Results in Table 6-13 showed the relationship between the frequency of visit from children to parents and the elderly parents’ life satisfaction. For one standard deviation (.698) increase in the frequency of visit from children (rarely), the probability of reporting being “not satisfied” increased 28.08 times, and the probability of reporting “normal or hard to tell” increased nearly 10.03 times. Moreover, for every .698 (standard deviation) increases in the frequency of visit from children (sometimes), the probability of reporting “normal or hard to tell” increased 316.8%, and the probability of reporting “somewhat satisfied” increased 201%.

Table 6-14: Multi-nominal Regression Analysis for Chinese Elders’ Life Satisfaction and the Frequency of Visit from Parents (Associational model 2)

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -1.764 | .171 | -.250 | .779 | -.099 | .906 |
| Gender (Female) | 1.273 | 3.573 | -.073 | .930 | .092 | 1.097 |
| Marital status(Married) | 2.663** | 14.344 | 1.162* | 3.196 | .813 | 2.255 |
| Educational background | -.660 | .517 | -.384 | .681 | -.286 | 1.332 |
| The number of children | .191 | 1.210 | -.198 | .820 | .052 | 1.054 |
| Pension(Have) | -.477 | .621 | -.608 | .545 | -.412 | .662 |
| Medical insurance(Have) | .535 | 1.707 | .423 | 1.527 | 1.234* | 3.436 |
| Self-rated health | -1.903** | .149 | -.708** | .493 | -.808*** | .446 |
| Living arrangement | -.138 | .871 | -.751 | .472 | -.146 | .864 |
| Visit from parents Rarely | 1.279 | 3.594 | 2.172** | 8.772 | 1.104 | 3.015 |
| Visit from parents Sometimes | 1.036 | 2.818 | 1.331** | 3.787 | .651 | 1.917 |

a. The reference category is: satisfied.
b. The reference category for visit from parents is: often. 1=Rarely, 2=Sometimes, 3=Often.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Associational Solidarity Model 2

Results in Table 6-14 showed that elders' marital status and medical insurance had a significant positive correlation with specific categories of the dependent variable. In reference to "satisfied", married elders were more likely to report "not satisfied" and "normal or hard to tell" regarding their life satisfaction when compared to the "satisfied" category. Those elders who have a pension were more likely to express "somewhat satisfied" with their lives. Regarding self-rated health, its relationship with elders' life satisfaction remained the same as the basic life satisfaction model. In this model, the frequency of visit from parents to children had a significant correlation with the category of "normal or hard to tell." For every .624 (one standard deviation) increases in the two categories (rarely and sometimes) of visit from parents, the probability of reporting "normal or hard to tell" increased 5.77 times and 11.18 times respectively.

II.Affectual Solidarity and Life Satisfaction

Table 6-15: Multi-nominal Regression Analysis for Chinese Elders' Life Satisfaction and the Frequency of Giving Either greetings or presents from Children to parents (Affectual Solidarity Model 1)

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to Tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | .543 | 1.721 | 1.061 | 2.889 | .501 | 1.650 |
| Gender (Female) | .273 | 1.314 | -.121 | .886 | .394 | 1.483 |
| Marital status(Married) | 1.947** | 7.007 | 1.479** | 4.388 | .984* | 2.676 |
| Educational background | -.668 | .513 | -.524** | .592 | -.901 | .913 |
| The number of children | .002 | 1.002 | -.365* | .694 | .020 | 1.020 |
| Pension(Have) | -1.282 | .277 | -.405 | .667 | -.899** | .407 |
| Medical insurance(Have) | 1.390 | 4.014 | .794 | 2.211 | .447 | 1.563 |
| Self-rated health | -1.743** | .175 | -1.022*** | .360 | -.849*** | .428 |
| Living arrangement | -.035 | .966 | -.013 | .987 | .189 | 1.208 |
| Presents from children Rarely | 1.384 | 3.991 | 1.910** | 6.756 | .536 | 1.709 |
| Presents from children | 2.774* | 16.016 | 2.499*** | 12.175 | 1.164* | 3.202 |

| |
|---|
| Sometimes |

a. The reference category is: satisfied.
b. The reference category for presents from children is: often. 1=Rarely, 2=Sometimes, 3=Often.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Affectual Solidarity Model 1

Table 6-15 presents the first affectual solidarity model. In this model, elders' life satisfaction was related to the background variables–elders' marital status, educational background, the number of children, and pension. According to the table, married elders had higher probability of reporting all three categories of life satisfaction. Moreover, in reference to the "satisfied" category, elders with higher levels of education were less likely to report "normal or hard to tell" regarding their life satisfaction and elders without a pension are less likely to report "somewhat satisfied." Self-rated health was positively related to selecting the "satisfied" category since it has a strongly negative correlation with the other three categories (not satisfied, normal or hard to tell, somewhat satisfied). In this model, the frequency of receiving either greetings or presents from children on anniversaries or other important holidays were positively correlated with elderly parents' life satisfaction. For one standard deviation (.785) increase in the category of "rarely" receiving presents from children, the probability of reporting "normal or hard to tell" increased nearly 5.76 times, whereas for every .785 (one standard deviation) increase in the category of "sometimes", the probability of reporting "not satisfied" increased 15.02 times; the probability of reporting "normal or hard to tell" increased 11.18 times; and the probability of reporting "somewhat satisfied" increased 2.20 times.

Table 6-16: B and Exp (B) in the Multi-nominal Regression Analysis for Chinese Elders' Life Satisfaction and the Frequency of Giving Either Greetings or Presents from Parents to children (Affectual Solidarity Model 2)

| Independent variable | Life Satisfaction | | |
|---|---|---|---|
| | Not Satisfied | Normal or hard to | Somewhat |

| | | | Tell | | Satisfied | |
|---|---|---|---|---|---|---|
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -.127 | .881 | .376 | 1.456 | -.073 | .930 |
| Gender (Female) | 1.121 | 3.068 | -.206 | .814 | .177 | 1.194 |
| Marital status(Married) | 1.842** | 6.310 | .496 | 1.643 | .406 | 1.500 |
| Educational background | -.732* | .481 | -.309* | .734 | -.027 | .974 |
| The number of children | -.168 | .845 | -.232 | .793 | -.125 | .883 |
| Pension(Have) | -.872 | .418 | -.777* | .460 | -.703* | .495 |
| Medical insurance(Have) | .996 | 2.708 | .314 | 1.369 | .267 | 1.306 |
| Self-rated health | -1.783*** | .168 | -1.012*** | .363 | -.710*** | .492 |
| Living arrangement | -.225 | .798 | -.463 | .629 | .087 | 1.091 |
| Presents from parents Rarely | 1.376 | 3.959 | 1.382*** | 3.982 | 1.053*** | 2.866 |
| Presents from parents Sometimes | 2.522* | 12.459 | 1.137** | 3.118 | .910** | 2.484 |

a. The reference category is: satisfied.
b. The reference category for presents from parents is: often. 1=Rarely, 2=Sometimes, 3=Often.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Affectual Solidarity Model 2

Table 6-16 presents findings for the second affecutal solidarity model. As shown in this table, married elders had higher probability of expressing “not satisfied” with current lives. Elders’ educational background was negatively related to two categories of life satisfaction. Those respondents with higher levels of the education were more likely to report “not satisfied” and “normal or hard to tell” in comparison to “satisfied”. In addition, Table 6-17 demonstrates that elders without a pension had lower probability of reporting being “normal or hard to tell” and “somewhat satisfied” with their lives. The better the self-reported health, the probability of Chinese elders reporting “satisfied” increased. This model illustrated that the frequency of giving either greetings or presents on children’s anniversaries or other important holidays had a positive relationship with elders’ life satisfaction. For every .788 (one standard deviation) increase in the frequency of giving presents from parents to children (rarely) , the probability of reporting

"normal or hard to tell" increased 2.98 times, and the probability of reporting "somewhat satisfied" increased nearly 1.87 times. Additionally, for elders who reported "sometimes" giving either greetings or presents to their children had higher probability of reporting all three categories of the dependent variable, which implies that affectual solidarity has a strong relation with elders' life satisfaction.

III. Functional Solidarity and Life Satisfaction

Table 6-17: Multi-nominal Regression Analysis for Chinese Elders' Life Satisfaction and the Frequency of Providing Financial Support from Children (Functional Solidarity Model 1)

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -.724 | .485 | .536 | 1.709 | .188 | 1.207 |
| Gender (Female) | 1.105 | 3.020 | -.128 | .880 | .255 | 1.291 |
| Marital status(Married) | 2.244** | 9.432 | .634 | 1.885 | .521 | 1.684 |
| Educational background | -.887* | .412 | -.355* | .701 | -.079 | .924 |
| The number of children | -.047 | .954 | -.120 | .887 | -.113 | .893 |
| Pension(Have) | -.733 | .480 | -.309 | .734 | -.583 | .558 |
| Medical insurance(Have) | .798 | 2.222 | .410 | 1.507 | .140 | 1.150 |
| Self-rated health | -1.971*** | .139 | -.953*** | .385 | -.776*** | .460 |
| Living arrangement | .805 | 2.237 | -.774 | .461 | .025 | 1.026 |
| Financial support from children-No | -.243 | .784 | 2.705** | 14.958 | .117 | 1.124 |
| Financial support from children-Not frequent | 2.436 | 11.429 | 3.121*** | 22.661 | .833* | 2.299 |
| Financial support from children-Fairly frequent | 1.672 | 5.322 | 2.206** | 9.082 | .436 | 1.547 |

a. The reference category is: satisfied.
b. The reference category for financial support from children is: highly frequent. 1=No, 2=Not frequent, 3=Fairly frequent, 4=Highly frequent.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Functional Solidarity Model 1

Results from Table 6-17 shows that elders' life satisfaction had significant correlation with demographic variables, including marital status, educational background, and self-rated

health. Married elders were more likely to report being “not satisfied.” Those with higher levels of education were less likely to report “not satisfied” and “normal or hard to tell” when compared to the reference category “satisfied.” Furthermore, in this model, elders with better self-rated heath had lower probability of expressing “not satisfied” “normal or hard to tell” and “somewhat satisfied” with their current lives in reference to “satisfied.” This model showed that the frequency of financial support from children to parents had partially significant correlation with elders’ life satisfaction. Elders who reported not receiving financial support from their children were more likely to report their life satisfaction as being “normal or hard to tell” , whereas elders who selected “not frequent” had higher probability of reporting being both “normal or hard to tell” and “somewhat satisfied” with life. Last, elders who reported receiving financial support as being “fairly frequent” also had higher probability of reporting “normal or hard to tell” about their current life satisfaction.

Table 6-18: Multi-nominal Regression Analysis for Chinese Elders’ Life Satisfaction and the Frequency of Providing Financial Support from Parents (Functional Solidarity Model 2)

| Independent variable | Life Satisfaction | | | | | |
|---|---|---|---|---|---|---|
| | Not Satisfied | | Normal or hard to tell | | Somewhat Satisfied | |
| | B | Exp(B) | B | Exp(B) | B | Exp (B) |
| Age | -.021 | .979 | .000 | 1.000 | .002 | 1.002 |
| Gender (Female) | .727 | 2.068 | -.076 | .927 | .184 | 1.202 |
| Marital status(Married) | 1.902 | 6.702 | .292 | 1.340 | .239 | 1.270 |
| Educational background | -.878 | .416 | -.428** | .652 | -.024 | .976 |
| The number of children | -.084 | .920 | -.248 | .780 | -.100 | .905 |
| Pension(Have) | -.858 | .424 | -.721 | .487 | -.701 | .496 |
| Medical insurance(Have) | .725 | 2.065 | .190 | 1.210 | .039 | 1.039 |
| Self-rated health | -1.559*** | .210 | -.893*** | .409 | -.777*** | .460 |
| Living arrangement | -.773 | .529 | -.402 | .669 | .017 | 1.017 |
| Financial support from parents-No | -1.149 | .317 | 1.018 | 2.767 | .379 | 1.461 |
| Financial support from parents-Not frequent | -1.452 | .234 | .483 | 1.621 | .128 | 1.136 |
| Financial support from parents-Fairly frequent | -1.747 | .174 | .977 | 2.655 | .269 | 1.308 |

a. The reference category is: satisfied.
b. The reference category for financial support from parents is: highly frequent. 1=No, 2=Not frequent, 3=Fairly frequent, 4=Highly frequent.
c. This parameter is set to zero because it is redundant.
***p<.001; **p<.01; *p<.05

Functional Solidarity Model 2

As Table 6-18 illustrates, only elders' educational background and self-rated health had statistically significant correlation with elders' life satisfaction in this model. In reference to "satisfied", elders with higher educational were less likely to report their life satisfaction as "normal or hard to tell." In addition, elders with poor self-rated health were more likely to report being "not satisfied" with life compared to the "satisfied" group. Put it in reverse: elders who have better health are less likely to report "not satisfied" or were more likely to say, "satisfied" in life satisfaction. The model showed that providing financial support to children had no relationship in regard to elderly parents' life satisfaction.

# CHAPTER SEVEN

# SUMMARY OF FINDINGS AND DISCUSSION

In the preceding chapter, findings of statistical analyses were described. This chapter organizes and discusses the major findings related to the two groups of dependent variables—intergenerational solidarity and life satisfaction. This chapter will link findings together, thus providing a coherent explanation of the factors that influence urban Chinese elders' family relationships and their perceived life satisfaction. Furthermore, this discussion will provide both contextual understanding and commentary remarks regarding the connections between the study findings and the intergenerational solidarity approach and the equity theory. The discussion is composed of three parts: individual factors influencing intergenerational solidarity, life satisfaction among Chinese urban elders, and intergenerational solidarity in relation to life satisfaction.

## Individual Factors Influencing Intergenerational Solidarity

a) Marital Status

Zero-order correlation results showed that elders' marital status had a positive relationship with intergenerational solidarity, especially with the associational solidarity. When other background variables were controlled for in the regression analysis, results demonstrated that married elders had more frequent contacts with their children, including more frequent phone calls from parents and more frequent phone calls and visits from children. This result was consistent with an early study, which pointed out that parent-child separation lowered relationship quality and contact between parents and children (Aquilino, 1994). In the current study, although the effects of divorce, widowhood or other types of parental status on intergenerational solidarity were unknown, being married seemed to benefit parents-children relationship. In addition, without controlling for other variables, elders' marital status had a

positive, but weak relationship (r=.120) with the frequency of parents providing financial support to children. This result echoed the general assumption that married parents tend to provide more help to their children than widowed or divorced parents (Lowenstein et al., 2001).

b) Education

Without controlling for other variables, zero-order correlation analyses in this study found that elders' educational background had a positive correlation with intergenerational solidarity from parents to children. However, when other variables were added in to the intergenerational solidarity models, elders' educational background actually had a positive relationship with the associational and affectual solidarity from children to parents. When parents have higher levels of education, they seemed to receive more frequent visits and greetings from their children. This result can be understood under Chinese cultural context. It is generally known that educated parents often educate their children about respect of elders and be filial to parents and grandparents. Probably, for this reason, elders with higher levels of education would have children who held a more traditional view about family relationship, and possibly had more respect for their parents. If this explanation is true, an intriguing question is raised: do adult children possibly discriminate against elderly parents who have low levels of education, and have little respect and affection for them? If the adult children have more education, would they show more respect and affection to their parents? This question deserves more attention in future studies.

c) Pension

Findings of this study indicated that having a pension has a close relationship with intergenerational solidarity. The zero-order correlation analyses demonstrated that having a pension was positively related to all three dimensions of intergenerational solidarity, except for

the frequency of providing financial support from children to parents. In this study, about 73 % of the elderly respondents reported to have a pension and only 27 % of the elders did not have any pension. Results of regression models showed that having a pension actually promoted more frequent contacts between parents and children, especially from children to parents. For example, in the Table 6-6, for one standard deviation increase (.444) in pension, the probability of reporting the frequency of visiting parents as "sometimes" increased 38.4 % in reference to the "often" category. A plausible explanation can be proposed: having a pension may lessen the financial stress that adult children may have toward their parents. Without such financial pressure, children would not be embarrassed by not being able to provide financial support or assistance to their aging parents, thus they may be more likely to have frequent contacts with their parents.

d) Self-rated health

Based on the zero-order correlation analyses, results showed that elders' health conditions had a positive relationship with intergenerational solidarity (from parents to children), specifically with the associational solidarity, and partially in relation to measures of affectual and functional solidarity. The intergenerational solidarity regression models revealed that elders with a better self-rated health seemed to have more frequent contacts with their children and more intimate family relationships. Based on the results of the regression analyses, however, elders' health status had no connections with either of the intergenerational solidarity from children to parents. According to the traditional values of filial piety, adult children would be expected to provide more help physically and financially to their frail parents or those who are in greater need. The results from this study do not lend any support for this need-based theory of intergenerational support. Elders' health did not have a relationship with the frequency of

contacts and financial support from children to parents. One possible explanation could be that most of the urban elders in China now have a pension and medical insurance, thus their children do not have to provide physical and financial support. Another possible explanation could be the decline of parental power. As Chen (2007) stated, "The decline of parental power seriously limits parents' ability to manage intergenerational relations in the ways of their linking…with few economic or cultural devices left for parents to use to have their will forced upon their children, the willingness on the part of children becomes crucial to ensure old age support" (p. 235). In other words, the influence of Confucianism has declined with the process of industrialization and modernization; intergenerational relationships are no longer solely controlled by parents. Instead, interaction between generations seems to be established on a more equal basis. In that case, the frequency that elders receive contacts or financial support from children may not be determined by elderly parents' health condition or needs solely. Increasingly, it may depend on children's level of willingness to provide such care and support.

e) Other individual factors

Besides those individual factors described above, other background factors also had partially significant relationship with intergenerational solidarity. When no other variables were controlled for, elders' age was negatively related to the frequency of phone call (from both parents and children) and frequency of visit (from parents) as well as providing financial support from parents to children. However, when other variable were added into the intergenerational solidarity regression models, elders' age had a positive relationship with the frequency of giving either greetings or presents from parents to children. This result was consistent with a previous finding that older generations tend to express more affectual solidarity toward younger generations than the vice-versa (Richards, Bengtson & Miller, 1989). This finding also accords

with the Bengtson and Kuypers's (1971) theory—'developmental stake hypothesis/intergenerational stake hypothesis'. They suggested that parents consistently express higher levels of closeness in the parent-children relation. In Trommsdorff and Schwarz's study, the authors explained this theory as "parents are more interested in a stable continuation of positive relationships in the family including continuity of values, and so tend to overstate the positivity of their relationship with their children" (2007, p. 600). Furthermore, zero-order correlation analysis revealed that gender only had statistically significant correlation with self-rated family relationship and the frequency of providing financial support from children to parents. This study echoed findings from earlier studies that most children had a closer affectual relationship to their mothers than father (Lawton, Silverstein, & Bengtson, 1994). In addition, it is generally known that women have longer life expectancy than men (Monk, 1988). This might be the reason why mothers receive more financial support from children than fathers.

Regarding elders' living arrangements in relation to intergenerational solidarity, the zero-order correlation analyses found that co-residence with children actually had a negative relationship with associational solidarity and affectual solidarity. Decrease in the likelihood of associational solidarity (e.g., phone call and visit) should not be a surprising findings since there was no need for phone call and visits when elderly parents and children living together. This result is consistent with earlier literature (Lawton, Silverstein, & Bengtson, 1994). However, the negative correlation between co-residence and affectual solidarity was an interesting finding. In China, co-residence with children is a common choice of living arrangement for elderly parents. Chen and Short (2008) stated in their study that "indeed, the household can be a double-edged sword, promoting older persons' well-being by providing intimacy and support and perhaps weakening health when tensions are high" (p. 1400). Different from this statement, this study

found that elders' living arrangements, including co-residence, had no connection with their family relationship when combining the results of zero-order correlation and regression analyses of intergenerational solidarity. A plausible explanation is that Chinese elders nowadays already accepted the social changes directly or indirectly caused by industrialization and modernization. Whether elders choose to live alone or co-reside with children did not seem to matter much to their intergenerational relationships. An important question proposed by Chen and Short (2008) was: Are older people better off coresiding with their children? What if co-residence does not matter to intergenerational solidarity and well-being anymore, should we still make efforts to uphold the tradition of co-residency? What's more, another possible explanation is that only 7% of elderly respondents rated their health as "poor", which means that most elders in current study were physically capable of taking care of themselves. In this case, they do not have to live with their children in order to receive physical and emotional support.

**Life Satisfaction among Chinese Urban Elders**

Zero-order correlation results showed that elders' life satisfaction had a positive relationship with elders' marital status, educational background, self-rated health, having medical insurance and a negative relationship with elders' age. When no other variables were controlled for, increased age was associated with lower levels of life satisfaction. Kunzmann et al. (2000) pointed out that age per se is not a cause of decline in life satisfaction but rather health problems are related. In this study, based on the zero-order correlation analyses and the basic life satisfaction model (Table 6-12), results showed that there was no connection between age and self-rated health. This result may be affected by the limited number of the oldest-old group and elders with poor health. Therefore, generalizing the negative relationship between age and life satisfaction might be too arbitrary. Regarding marital status in relation to elders' life

satisfaction, the zero-order correlation analyses showed a dissimilar result with the basic life satisfaction model. When no other variables were controlled for, marital status had a positive but weak relationship ($r = .195$) with elders' life satisfaction ($p < .001$). That is to say, without controlling for age, educational background, and other individual variables, married elders were more satisfied with their lives. On the other hand, the basic life satisfaction model showed that married elders actually were more likely to report "not satisfied" and "normal or hard to tell" regarding their life satisfaction in comparison to the reference category—"satisfied." The reason for such a directional change in life satisfaction was unclear and warrants more exploration in future studies.

Furthermore, without controlling other variables, elders' educational background had a positive relationship with their life satisfaction, which was consistent with the results found from the basic life satisfaction model. Elders with higher levels of education seemed to express higher levels of life satisfaction. A similar result was found in a previous study that elders with lower levels of education had a higher probability of experiencing isolation, loneliness and thus lead to lower levels of life satisfaction (Mullins & Elston, 1996). As an old Chinese proverb says, "knowledge changes fate and learning makes your life succeed." A higher level of education usually means more available resources and a higher socio-economic status. Many longitudinal and cross-sectional studies have already stated that SES is a significant factor in influencing individuals' lifestyle and predicting one's life satisfaction (Seeman, Albert, Lusignolo, & Berkman, 2001; Chappell, 2005).

Moreover, zero-order correlation results showed that having medical insurance had a positive but weak relationship ($r = .098$) with elders' life satisfaction. To interpret this result, the Chinese context needs to be taking into consideration. As England (2005) stated in the book

*Aging China: the demographic challenge to China's economic prospects*, along with the rapid economic development in China, the portion of personal paying for health services has largely increased. According to Liu et al. (2002),

> The China National Health Services Surveys report that out-of-pocket expenses for those who became ill increased more than 60 percent between the 1992 and 1997, rising from 28 percent to 44 percent of the cost of services. The number of people who did not seek care when they were ill rose from 41 percent to 50 percent (p. 3).

In rural areas, most elders still rely on their personal savings and children' financial support when they need to utilize health services. The situation is different for elders in urban areas. As England (2005) explained, although the quality of medical care had advanced in urban areas, enterprises were trying to reduce their costs and put more of the burden on individual. Therefore, to afford a high quality health care in urban areas, having medical insurance seems to be extremely important to elders and therefore affecting elders' life satisfaction.

Results of this study also indicated that self-rated health was a strong predictor of life satisfaction among urban elders in China. This result has been found in other studies as well (Chappell, 2005; Zhang & Yu, 1998; Hilleras et al. 2001). According to Mannel and Dupuis (1996), self-rated health is the best single predictor of life satisfaction. Zhang & Yu (1998) further stated that self-reported health status might be a more significant predictor than the actual number of chronic disease one has because life satisfaction, as a measure of subjective well-being, was more likely to be affected by subjective than objective measures.

Two important variables, surprisingly, showed no statistically significant effect on life satisfaction: the number of children and living arrangements. Many previous studies supported the idea that co-residence between elderly parents and their adult children are beneficial to elders for they may receive more frequent physical and emotional care (Hays, 2002; Zunzunegui et al.). Co-residence has been a preferred choice of living arrangement for most Chinese elders because

of the traditional practice of patrilocal living arrangements. The lack of statistical significance between co-residence and life satisfaction in this study may have two plausible explanations: The first explanation is that, the result could be affected by the limited number of the elderly respondents who did not have any children living together or nearby (14.1%) compared to those who have children living together or nearby (85.9%). In other words, vast majority of elders who did live with their children did not necessarily rate their life satisfaction higher than those who did not. When the number of elders living alone or separately by themselves (with spouse) increases in the future, are these elderly more likely to report lower life satisfaction than current cohorts? This is a good question for future research. The second plausible explanation is that along with industrialization and modernization, co-resident with children might not be the most favorable living arrangement for elderly parents anymore. In this case, living arrangements may no longer be a crucial factor that affects elders' life satisfaction.

What's more, study results also revealed that the number of children was not significantly correlated with elders' life satisfaction. The old Chinese proverbs, "Having children makes one's old age secure" and "Sons and grandsons pervaded the hall" described the importance of having offspring. I argue that this result could be associated with the One-child policy and the availability of children to fulfill their filial responsibilities. In rural areas, the number of children might be still important to elderly parents' well-being for they need the labor force in farming. However, there is no such need for elders in urban areas. Also, the more children an elder has may indicate more resources and support that the elder may receive. However, there was no direct and definite causal relationship between the number of children and resources. If this is the reason, it should be understood that the number of children was not a significant predictor of life satisfaction among urban elders in China.

**Intergenerational Solidarity and Elders' Life Satisfaction**

As described in Chapter 2, the intergenerational solidarity model was utilized in this study to understand intergenerational family relationship and its impact on urban elders' life satisfaction in China. The intergenerational solidarity model is comprised of six dimensions: associational, affectual, normative, structural, consensual, and functional solidarity (Bengtson, 2001). This study only tested associational, affectual, and functional solidarity. Based on the zero-order correlation analyses and intergenerational solidarity regression models (Table 6-13 to Table 6-18), study results did not entirely support equity theory. According to the equity theory, elders who have reciprocal relationships with their children should experience higher levels of well-being (e.g., McCulloch, 1990). Results of current study indicated that the reciprocal relationship only existed in affectual solidarity while parents-children relationship in other dimensions was "unbalanced."

For associational solidarity, when no other variables were controlled for, elders' life satisfaction had a stronger positive relationship (r=.389) with the frequency of visit from children to parents compared to the relationship between life satisfaction and the frequency of visit from parents to children (r=.290). Moreover, comparing Table 6-13 (associational solidarity model 1) and Table 6-14 (associational solidarity model 2), results showed that the frequency of visit from children to parents had stronger statistical significance than the frequency of visit from parents to children in relation to elderly parents' life satisfaction.

In addition, a similar pattern was found in functional solidarity as well. Zero-order correlation results showed a positive, but weak relationship (r=.135) between life satisfaction and the frequency of financial support from children to parents whereas no statistically significant relationship was found between life satisfaction and the frequency of financial support from

parents to children. The two functional solidarity models (Table 6-17 and Table 6-18) also demonstrated that providing financial support from children to parents had an impact (positive or negative) on elders' life satisfaction while how often parents provided financial support for their children had no importance in their life satisfaction. As Chen and Silverstein (2000) pointed out, China does not have a universal old-age insurance system; financial security among elderly parents still derives primarily from adult children. Therefore, it is not surprising that receiving financial support would be associated with higher life satisfaction among older parents.

What's more, different from associational and functional solidarity, the relationship between parents and children in affectual solidarity seemed to be established on an equal basis. Without controlling for other variables, elders' life satisfaction had a positive correlation with the frequency of giving either greetings or presents from both parents and children. Table 6-16 (affectual solidarity model 2) demonstrated that elders who reported giving either greetings or presents to their children as occurring "sometimes" were more likely to report being "not satisfied", "normal or hard to tell" and "somewhat satisfied" in reference to the "satisfied" category. A similar pattern can be found in Table 6-15 (affectual solidarity model 1). Based on this result, it is too arbitrary to conclude that the more often that parent and children give either greetings or presents to each other on their anniversaries or other important holidays, the higher levels of reported life satisfaction among elderly parents. As a matter of fact, study results can only conclude that affectual solidarity was important to elderly parents' life satisfaction in both directions (e.g., parents and children), implying it is not a one dimensional exchange that affects elders' life satisfaction.

Zero-order correlation results also showed that self-rated family relationship and the frequency of giving either greetings or presents from parents had a positive correlation with

associational solidarity. This finding suggests that the levels of affectual solidarity may affect the levels of associational solidarity. In Zhang and Yu's study (1998), they mentioned the importance of emotional family relations for life satisfaction among elderly parents in China. Lowenstein, Katz, and Gur-Yaish (2007) explained the reason why affectual solidarity is an important predictor of life satisfaction by stating "in modern societies, families seem to be less duty-driven, and therefore personal affection becomes more important for family cohesion and intergenerational family ties" (p. 877).

*Reciprocity and the Theoretical Perspectives: Equity*

Equity theory was used as a theoretical framework to examine the reciprocity of three dimensions of intergenerational solidarity between older parents and their adult children. However, equity theory was not entirely supported in this study. Study results showed that older Chinese still expect contact and financial support from their children. Different from the intergenerational transfer of financial assistance in the U.S. which is typically a flow from top to bottom (Bengtson 2002); Chinese elders appeared to expect financial support from bottom up, or from children to parents. This expectation could very well be the continuation of parents' expectation of filial piety. However, the pattern in affectual solidarity showed a more reciprocal relationship between parents and children. A possible explanation can be proposed: the Chinese families as corporate groups which members usually put their collective interests above those of individual members and they work together to pursue their collective ends (Chen, 2007). For this reason, individual family members might make efforts to create harmonious family relationship, because harmonious family relations are very important to Chinese people. As Zhang and Yu (1998) wrote, "for Chinese elderly, harmonious family relations are not merely valued for happiness of life but internalized as a measure of life achievement" (p.122). As a result, both

parents and children would show their affection to each other. The central message emerged from the study findings regarding the equity theory—Chinese elders had the highest level of life satisfaction when they receive more frequent contacts, financial support, and affection from their children.

**Study Limitations**

Several limitations should be mentioned in this research. First, this study used secondary data collected by Zhenjiang Population and Family Planning Committee. The goal of the survey was to understand various issues related to elders' quality of life. A major problem with the data is that respondents' responses were not paired or matched with members of the same family. For this reason, the current study could not exam the intergenerational solidarity from both parents and their own children's perspectives. Second, although the survey contained more than 150 questions, the questions designed to exam intergenerational relationships were very limited. Thus, this research could not conduct a more detailed and comprehensive analyses regarding each dimension of intergenerational solidarity. In addition, the missing values were too high in the associational solidarity due to the high percentage of co-residence between parents and children. If the sample contains relatively equaled amount of elders who have children living together and who do not have any children living together, study results might be different. Furthermore, most of the elderly respondents recruited in this research were physically and financial capable of taking care of themselves, whether or not this is representative of the current Chinese elders in urban China, the author cannot conclude. Therefore, caution should be taken in interpretations of the data and its findings.

**Research Questions for Future Studies**

Based on the study findings, several study questions are raised for future research. First, this study results revealed that three dimensions of intergenerational solidarity were closely related to elders' life satisfaction. To ensure future elders' well-being and life satisfaction, it is important to understand factors that influence intergenerational solidarity. Is it because of the traditional value of filial piety held by adult children? or elderly parents' needs? or children's ability or availability to provide intergenerational support? Findings from this study seem to indicate that affectual solidarity play the most statistically significant role in older adults' life satisfaction. Even though associational and functional (or financial) solidarity continue to be statistically significant factors contributing to elders' well-being, these factors are mostly one-dimensional, that is from children to parents, as a continued expectation of filial piety. Living arrangements, including having children living under the same roof or nearby, no longer appears to be a factor contributing to elders' life satisfaction. These findings appear to point to a new trend or direction in understanding elders' well being or life satisfaction in urban China, that is, as growing numbers of urban elders become more content with their own living arrangement and financial self-sufficiency, greater emphasis will be put on affectual solidarity, especially among the young-old, as most of respondents were in this sample. As age increases and disability is likely to increase, at that time, associational and functional solidarity are likely to play a more important role. The One-child policy, however, has created large numbers of "4-2-1" families in China, where the future sandwich generation of the One-child will have to taking care of 4 or more elderly parents and grandparents and at least one of their own children. For these families, how do adult children remain contacts and emotional bonds with their parents when they have very limited leisure time? Moreover, in China, the massive rural-to-urban migration is also a

problem which cannot be ignored. According to record from the National Statistics Bureaus of China (2006), the number of Chinese rural-to-urban migration has quadrupled from 34 million in 1989 to 147 million in 2005. Such large volume of migration implies that more elderly parents are left behind in rural areas in nowadays than ever before. Du et al. (2004) pointed out that older parents who are left behind had higher probability of experiencing reduced psychological wellbeing due to feelings of loneliness and abandonment from their children. All of these issues raised in above are both theoretical and practical questions for the future of Chinese families as well as researchers.

**Conclusion**

To summarize, results from zero-order correlation and regression analyses showed that associational, affectual, and functional solidarity played important roles in influencing the levels of life satisfaction among Chinese urban elders. Educational background, having a medical insurance, and self-rated health also were strongly related to elders' life satisfaction.

The intergeneration exchanges noted in urban China demonstrate a pattern of continued relationship between elderly parents and their children, including the exchange of financial resources, contacts, and affections. As a matter of fact, Chinese society and traditional culture have changed dramatically in recent years due to industrialization and modernization. Chen (2007) explained:

> For grown children in today's urban China, as the economic rationale for being deferential to older generations is no longer as pressing and imperative as it was in the past, and the cultural norms that favors the 'rule of elder' are no longer being upheld and guarded with such vigor and favors as they were in the past, there are fewer powerful external forces that push or compel grown children into the preordained mode of human conduct of complete obedience to the wishes and whims of the older parents (p. 257)

The current study revealed that the traditional practice of intergenerational support has been largely maintained in urban China, even though the parental power appeared to be more

negotiated, rather than absolute. Most elderly parents still expected to be cared for by their grown children. For urban elders, the upward flow of financial resources may not as important as elders in rural areas, since they may have more personal sayings, pensions, and medical insurances. However, the emotional bonds and the frequency of contacts between parents and children are still important to their life satisfaction.

Results from this study increased our understanding of the intergenerational relationship and older adults' life satisfaction among Chinese urban elders. Study findings contribute to the existing body of literature in the overall theoretic understandings of intergenerational solidarity, life satisfaction, as well as the association between specific dimensions of intergenerational solidarity and older adults' life satisfaction. Furthermore, findings also contribute to a more contextualized understanding of Chinese urban elders' patterns of intergenerational exchange, factors influencing life satisfaction, and the roles of various dimensions of intergenerational solidarity play in Chinese elders' reported life satisfaction. By placing these findings in the context of changing Chinese economy, family structure, and cultural practices, this study advances knowledge of Chinese family life, culture and society as this specific time of the Chinese history in the making.

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