Social Support and Quality of Life: China's Oldest Old

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First Draft

July 29, 2004

Paper presented at the workshop on "Determinants of Health Longevity in China" at Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany, August 2-4, 2004.

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Abstract

In this paper, we explore the relationships between social support and quality of life using the first wave of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) conducted in 1998. In societies where adult children are expected to care for elderly parents, it is often assumed that the elderly residing with one of their children would have the best quality of life. We find evidence that suggests otherwise. Elderly people living in nursing homes are more satisfied with their quality of life compared to the elderly living with children. The elderly living alone report the lowest quality of life. While elderly people living in nursing homes are selective, the results point to the importance of social support from friends and peers in fostering high quality of life for the elderly. All sources of social support are beneficial to the elderly – the oldest old have a strong likelihood to report good quality of life if they live in nursing homes, are visited frequently by children, and know that family members would take care of them when they are sick. We discuss the implications of these results for societies that are aging fast as a result of rapid fertility declines.

Social Support and Quality of Life: China's Oldest Old

Social support has long been known to affect an individual's emotional and physical health and general well being (Dean, Kolody, and Wood 1990). Social support can offer a buffer against stress, protect people against developing illnesses, provide emotional support, and lead to an increased life span (Ross and Mirowsky 2002). Research on aging has consistently demonstrated the positive effect of social support from family and peers on the well being of elderly. Elderly tend to have better quality of life if they receive regular care and support from family members as well as friends and peers (Matt and Dean 1993). Yet, social support has multiple dimensions. Different sources of social support may have differential impact on quality of life for the elderly.

To say the least, social support of the elderly involves both objective and subjective activities (Turner and Marino 1994). For example, elderly people living with children or other family members should have regular interactions with family members and receive physical and emotional support. These objective activities are expected to increase their quality of life. Meanwhile, some elderly individuals live on their own, but the simple belief that family members would take care of them when they are ill is likely to shape their positive attitudes. In this study, we examine different dimensions of social support on perceived quality of life for the elderly. In particular, we compare differences in quality of life between those with regular interactions with family members and those with regular interactions with their peers. Specifically, we pay special attention to the oldest old (aged 80 and above) and compare quality of life between those living with children and those living in elderly (nursing) homes. This research contributes to a better understanding of the relationships between family and peer influences on perceived quality of life. Most of the pervious work on social support and quality of life has

focused on developed countries such as United States. Here we use data from the Chinese Longitudinal Healthy Longevity Survey (CLHLS) to examine this relationship in a different social setting. We address three main questions: (1) What is the quality of life like among China's oldest old? (2) How objective and subjective dimensions of social support affect quality of life? And (3) whether social support from families or peers leads to better quality of life?

PREVIOUS RESEARCH

For a very long time in history, and still today in many developing countries, an important goal of human reproduction was old age support. Parents invest in time and money to bear and raise children so children, in turn, would care for them when they are old. Because their well-being is on the line, the elderly usually have high levels of expectations of their children. Whether the elderly get what they expect (i.e., receive care) affects quality of life. Scholars label this behavior as reciprocity – the normative obligation of a help recipient to assist people who have provided help to them (Gouldner 1960; Bulmer 1987; Finch 1989; Horwitz et al. 1996). Parents provide all kinds of support to children at early stage; when parents get old and gradually lose health and independent living, children are supposed to take care of their parents in return. The elderly with no living children, however, can't have this arrangement. Thus, the elderly with living children may exhibit high levels of quality of life as the investment to bear and rear children is paid off. We hypothesize that the elderly with children are expected to have higher quality of life than the childless elderly.

Social Support and Living Arrangement

It is important for the elderly with children whether they are able to receive support from their children. Although the elderly in developed countries mostly live solely with their spouses or, if not married, live alone, the elderly in developing countries, just like those in the developed countries in the twentieth century, reside with at least one child (Kramarow 1995). Living arrangement, an indicator to subjective well being of the elderly, are expected to affect the quality of life. The elderly living with children should have higher quality of life (Hochschild 1973). However, recent changes in living arrangement may suggest otherwise. The increase in the proportion of the elderly living alone in the United States has been explained by a decline in fertility, the rising income levels of the elderly, and the rise in individualism (Kramarow 1995). A decline in fertility is strongly associated with a decline in values of children (Caldwell 1982). The decline in values of children makes it less desirable for an elderly man or woman to reside with one of the children. Economic and cultural reasons also point to the directions that the elderly prefer to live alone so they can have their freedom and privacy and enjoy better quality of life (Kramarow 1995).

It is well known that the fertility decline has become widespread in developing countries, but income levels for the elderly and cultural norms about living arrangement of the elderly have not changed significantly. Residing with one of the children remains a popular living arrangement. In such an arrangement, parents receive goods and services that they otherwise might have to purchase while children may benefit from childcare and other household services (DaVanzo and Chan 1994). This is cost effective because both parents and children can save money by living and eating together. In addition, filial piety towards the elders is a norm in many developing countries. As a result, the elderly in developing countries overwhelmingly live

with their children (Logan, Bian, and Bian 1998). However, data from the United States and other developed countries show that the elderly with financial means are willing and increasingly likely to live on their own over time (Kramarow 1995). This suggests that the quality of life is not optimal for those living with children. Indeed, previous studies showed that familial support does not increase the quality of life among the elderly (Blau 1973; Arling 1976; Wood and Robertson 1978). Some argue that voluntary interpersonal attachments such as friendships are more positively associated with self-reported quality of life than involuntary social ties, such as kinship bonds (Wood and Robertson 1978; Ellison 1990). In other words, elderly who are stuck with their children in the house may not be happy with such an arrangement because family relationships can be potentially complicated, intergenerational conflict can become common place, and grandchild-care responsibilities can hardly be avoided. In addition, the risk of completely counting on their children may be high because it is never certain whether their children would provide the financial security. Nursing homes or elderly homes, once thought to be a place for the elderly without living children, may become a viable option.

Although institutionalization such as living in a nursing home has generally been viewed negatively, this arrangement may result in a strengthening of family ties or a renewed closeness between the parent and the child. If elderly parents and children can afford having the elderly to live in nursing homes, strain and pressure caused by living together may be alleviated (Smith and Bengtson 1979). What matters in this scenario is whether children pay visits to the elderly. The elderly living in nursing homes with frequent visits from children and grandchildren are likely to increase their quality of life because these visits may raise their status and gain respect among the peers. In addition, the elderly living in nursing homes engage in frequent interactions with peers and friends, which is shown to have strong positive effect on their quality of life. They live

in an environment in which they can share common concerns and problems (Matt and Dean 1993). Elderly people may increase the sense of belonging and self-worth, which promotes positive attitudes towards life. Thus the elderly living in nursing homes may report higher levels of quality of life than those residing with one of their children. In a society culturally unacceptable for elderly with living children to live alone, living alone without strong financial stability may report the lowest quality of life.

Perceived Support and Resources

In addition to social supportive behavior (from family and peers), subjective appraisal of support also is one important dimension of social support (Turner and Marino 1994). Wethington and Kessler (1986) have presented evidence that perceived support is more important than received support in buffering the effect of stressful events. Just knowing support is available can reduce negatively emotional and behavioral responses to stressful events and promote health (Veiel and Baumann 1992). For the elderly, the thoughts of being cared for when they are sick, thus, can be an important predictor of quality of life. Nevertheless, the relationships between received support and perceived support is intertwined (Turner and Marino 1994). The elderly who live with families and peers or receive frequent visits from their children may form their strong perception that they will receive support and care, which leads to better quality of life.

Social Support and Social Structure

Urban-rural inequality in socioeconomic status is large in many societies. In many developing countries such as China, urban and rural differences are everywhere, including

accesses to educational and career opportunities, health care, financial support, and housing (Lin 1995). Rural residents have fewer opportunities to secure jobs outside farming. In contrast, urban residents are usually entitled a much better health care and public pension than rural populations. However, fertility rates are much lower in urban than in rural areas. This may increase the likelihood that rural elderly residents are much more likely to reside with at least one of their children than urban elderly residents. It is likely that the urban elderly may be more likely to live in nursing homes than the rural elderly. The rural elderly living in nursing homes may be more selective and consist mostly of those with no living children.

Education and occupation measure a person's socioeconomic status. It directly relates to how much an elderly can support him or herself and how much they need the financial support from their children. Previous research on the relationship between socioeconomic status and social support is mixed. Some suggest that lower socioeconomic status individuals tend to have social relationships of lower quality but some others report no class differences (Belle 1982; Ensel 1986). With other variables taken into account, the relationship between education and quality of life is indeed very strong. Education improves a person's well being because it gives people access to non-alienated paid work and economic resources that increase the sense of one's control over his or her life, as well as access to stable social relationships (Ross and Willigen 1997). According to Kohn (1976) and Marx ([1884] 1964), well being first comes from non-alienated work in which people exert control over the labor process. Quality of life enhances if individuals perceive controls in their lives. In addition, well-educated people are more likely to have access to stable social relationships with their marriage and their children, which are positively associated with quality of life (Ross and Willigen 1997). Occupation is expected to

play a similar role. Those in professional jobs before retirement are likely to have better quality of life compared to those in manual jobs.

Health and Quality of Life

Physical conditions may influence both social support and quality of life. The elderly with mental or physical illness are the ones most likely to need assistances and support. These needs may increase the burden of family members and amplify the intergenerational conflict, which can lead to lower quality of life. Moreover, active elderly people tend to have more access to daily activities such as entertainment and social interactions with friends, which increases the subjective well being (Mutran and Reitzes 1984). Therefore, healthy elderly men and women are expected to have higher quality of life than their less healthy counterparts.

CHINA'S OLDEST OLD

The elderly population in China has been growing rapidly as a result of a sharp decline in fertility (Ogawa 1988; Zeng and Vaupel 1989; Zeng and George 2000). The proportion of the population aged 60 or over increased from just over 7 percent in 1953 to more than 10 percent in 2000, and is projected to reach 27 percent in 2050 (Riley 2004). The quality of life and the well being of the elderly have become primary concerns for Chinese society. It is especially the case that the Chinese pension system is in its early stage of development. Different from Western countries in which elderly can partly rely on social security, the family rather than society in China is the primary care taker of the elderly. Lack of governmental support and the early stage of the social security system probably indicate hardship for the elderly without children's support.

The well being of the Chinese elderly depends on their living arrangement and social structures. Only 3.4% of the Chinese elderly aged 65 and above lived alone in 1987.

In China, filial obligation is paramount. Elderly parents are proud to live with their children, especially with one of the sons. It is viewed to be a shame for a family to have their aging parents to live alone or in nursing homes. Although stresses and tensions are common among extended families, they live together to conform to the social norm. The increase in life expectancy means many more years in such arrangement. Adult children, burdened by such arrangement especially when aging parents become more dependent, may seek a way out (Zeng et al. 2000). Demographically, a growing aging population coupled with a decline in fertility also suggests that such a living arrangement no longer becomes attainable for all aging parents. Nursing homes and/or living alone may be alternatives for the elderly. Among urban families, especially among the well-to-do families, more elderly people can afford to move into nursing homes or elderly homes.

THE CURRENT STUDY

To summarize, our goal is to examine how different dimensions of social support affect quality of life for China's oldest old. We have argued here that living arrangement is an important form of social support. Residing with children, living alone, or living in nursing homes affects quality of life. Despite the social norm that adult children are responsible for caring for elderly parents, a growing percentage of the elderly lives in nursing homes. We hypothesize that the elderly who live in nursing homes or who receive children's frequent visits should report better quality of life than the elderly who live elsewhere or who don't receive

children's frequent visits. We also hypothesize that the elderly living alone are least likely to report good quality of life.

We argue that perceived social support is important predicting quality of life, which is net of the impact of objective behavioral social support. The elderly are likely to form their perception of support based on regular support from family members and peers. We hypothesize that those with perceived support are more likely to report better quality of life than those without perceived support. Perceived support from family members is expected to have a stronger effect on quality of life than perceived support from nonfamily members. We further examine how social structures affect quality of life. In China, urban residents with higher levels of educational attainment and better jobs before retirement are more likely to have resources ready for their retirement and are more "successful" to raise their children equipped with financial stability compared to rural residents. Thus, the urban elderly are expected to report better quality of life than the rural elderly.

The relationship between social support and quality of life has been well explored in developed countries. To our knowledge, this paper is among the first to examine this relationship for a unique subpopulation (oldest old) in China. This paper is likely to provides some important implications to policy makers in a population that is aging at a fast pace.

DATA AND METHODS

Sample

We use data from the first wave of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) conducted in 1998. The survey was administered to 9,093 respondents from 631 randomly selected counties and cities from 22 of the 31 provinces in China. The questionnaire

covers a wide range of aspects concerning the oldest-old Chinese, such as their socioeconomic status, living arrangements, family structure and support, daily activities, health status, and psychological characteristics. For the first time, this survey provides us with a complete profile of the Chinese oldest old. We limit our analyses to respondents aged between 80 and 110.

This survey over-sampled extremely old persons such as centenarians and nonagenarians, and over-sampled oldest old males, given the fact that there are fewer persons at more advanced ages, and fewer males than females (Zeng et al. 2001). Therefore, appropriate weights were used to obtain the means and the standard deviations of all variables (presented in Table 1).

Measuring Quality of Life

"Quality of life" is a term used loosely to indicate general well-being (Haug and Folmar 1986). Indicators of a good quality of life include health, sufficient funds, absence of psychological distress, and availability of supportive family and friends (Dowd and Bengtson 1978). One important aspect of quality of life is subjective attitudes and feelings (Schuessler and Fisher 1985). Subjective quality of life measures a person's sense of well-being, life satisfaction and happiness (Dalkey and Rourke 1973).

Quality of life is our dependent variable. Self-reported quality of life is measured by responses to a single question – "[How would you rate your] self-reported quality of life?" Six levels of quality of life were given: very good, good, so so, bad, very bad, and not able to answer. Our sample of the oldest old is very selective, who live longer than many of their peers (Christensen and Vaupel 1996; Zeng 2001). It is not a surprise that many report good quality of life. Only 3 percent of the respondents in our sample rate their quality of life as "bad" or "very bad" so we classify "so so", "bad", and "very bad" into one category "not good". Likewise,

"very good" and "good" are grouped into one category "good." As shown in Table 1, 72 percent report quality of life to be good while 28 percent report quality of life to be not good.

(Table 1 about here)

Measuring Social Support

We include two dimensions of social support – objective behaviors and subjective perceptions. Objective behavior is measured by living arrangement. Living arrangement is divided into four categories: living with children with or without spouse (67 percent), living with spouse only (13 percent), living in a nursing home (7 percent), and living alone (13 percent). We hypothesize that the elderly living with children are more likely to receive support from their children. However, intergenerational conflict, lack of privacy, and care for grandchildren may lower quality of life for the elderly. Based on the prediction that peers networks have stronger effect on their quality of life than family members, the elderly living in nursing homes are likely to have better quality of life than those living with children. We also include a variable that measures whether non-resident children pay regular visits to their elderly parents. Three quarters of the elderly do receive visits from their non-resident children.

The subjective perceptions of support are measured by whether they would receive care if they get sick. This variable consists of support from family members, non-family members (friends and social workers), and nobody. In this sample, 90 percent expect care from family members; 8 percent from non-family members, and 2 percent from nobody. We expect those who would receive support from family members to have the highest quality of life. Respondents who think that nobody would care for them should have the lowest quality of life.

We also include primary and secondary sources of financial support. We create a new variable based on these two sources: (1) financial support from own or spouse (11%), (2) from children or relatives (59%), (3) from government or other sources (5%), (4) from own, spouse, children, or relatives (17%), and (5) from all sources – own, spouse, children, relatives, government, and others (8%). For simplicity, these categories are labeled as own, children, government, family, and all sources. The elderly who can support themselves are most likely to have higher quality of life than the elderly who depends on other sources of support.

Measuring Social Structure Variables

These social structure variables include urban/rural residence, educational attainment, and occupation at retirement. As discussed above, urban/rural differences are strong in many arenas. Here, we expect where elderly live – urban or rural – has a strong effect on quality of life. Educational attainment of the elderly is another important variable. However, most of these elderly received their education in the 1920s when the majority of Chinese received little formal education. Thus, education levels are grouped into three groups: no education (63%), 1-6 years of schooling (27%), and 6 and more years of schooling (10%). Main occupation before age 60 is categorized into four groups: (1) professional and governmental (10%), (2) worker or farmer (71%), and (3) housework and others (19%).

Measuring Health Status

Physical conditions may influence both social support and quality of life. We hypothesize that the oldest-old Chinese with poor health have a negative self-perception of their quality of life. The survey has questions on self-rated health status, activities of daily living

(ADL), and interviewer-rated health status. Because of the strong association of the three variables, we rely on activities of daily living as the most objective measure of an elderly person's health. We follow Zeng et al. (2001) to employ the Sullivan method for calculating the ADL. The ADL functional statuses include eating, dressing, transferring, using the toilet, bathing, and continence. If none of the six ADL activities is impaired, the person is coded "active" for ADL; if one or two activities are impaired, the person is coded "with mild disability;" if three or more activities are impaired, the person is coded "with severe disability." The Cronbach's test of ADL index shows a very high reliability coefficient of 0.86. The sample is comprised of 82 percent of the elderly who are classified as active, 12 percent with mild disability, and 6 percent with severe disability.

As controls, we include age and gender in the sample. Age is classified into three categories: 80-89, 90-99, and 100-110. The survey oversamples oldest individuals. After weights are taken into account, our sample includes about 91 percent of the elderly aged 80-89, 8 percent of the elderly aged 90-99, and only 1 percent of the elderly older than 100. Without weights, the age distributions are 42 percent, 34 percent, and 24 percent, respectively. Our weighted sample includes 63 percent of the elderly who are female. We also control for whether the elderly have had children and whether any of the children is still alive.

Statistical analysis

As described above, quality of life has two categories: good or very good (coded as 1) and so so, bad, or very bad (coded as 0). Logistic regression methods are employed to predict the effects of the selected variables on the odds of the elderly reporting good quality of life. We first introduce different measures of social support in the models (living arrangement, visits by

children, perceived social support when sick) and then include other control variables (sources of financial support, ADL status, residence, education, occupation, age, sex, and whether the elderly person has children still alive). Our goal is to compare the magnitude of changes for different sources of social support after other control variables are taken into account.

RESULTS

Descriptive Analyses

We begin our analyses by presenting some bivariate relationships between each independent variable and the dependent variable. Social support variables have the expected relationships with quality of life. Figure 1 presents percentages of the elderly reporting good quality of life by living arrangement. A whopping 87 percent of the elderly living in nursing homes report their quality of life to be good or very good. In contrast, those living with children or living only with spouse are similar – close to three quarters report their quality of life to be good or very good. A sharp contrast is for those living alone. Approximately half of them report good quality of life. Overall, the quality of life is indeed high for the elderly in our sample (aged between 80 and 110). This may be the very reason they live longer than those who did not make to these ages. We can get some sense of this selectivity by examining age differences in quality of life described in Table 2 – the older an elderly person is, the higher his/her reported quality of life. One significant finding is that the elderly living in nursing homes enjoy the highest level of quality of life. We will focus on this finding later.

(Figure 1 about here)

Figure 2 presents the percentage of the elderly reporting good quality of life by whether they are visited by non-resident children. Visit by non-resident children is an important form of

social support, reflecting the elderly persons' interactions with their children and support from their children, and indicating that the family is generally cohesive and harmonious. Seventy-three percent of the elderly who are visited by children report good quality of life in comparison to 70 percent of the elderly who are not visited by children. The difference is surprisingly small. This result, however, is confounded by a significant number of elderly persons living in nursing homes tend to report good quality life and many of them do not have children. We will control for this effect in multivariate analyses.

(Figure 2 about here)

Perceived support is another important dimension of social support. It is measured by who would take care of them if they become sick. Seventy-seven percent of the elderly who perceive support from non-family members report good quality of life while 73 percent of the elderly who perceive support from family members report good quality of life. Most of the elderly who perceive care from non-family members live in nursing homes. This is the unusual group who report the highest quality of life. The elderly who perceive support from nobody have the lowest quality of life – Less than one third report their quality of life to be good.

(Figure 3 about here)

The bivariate relationship with quality of life for the rest of the variables included in multiple regression models is presented in Table 2. Sources of financial support are strongly associated with quality of life. Interestingly, the elderly who rely on their own for financial support enjoy the highest quality of life (78 percent). In contrast, the elderly who rely on government or other sources for support report lowest quality of life (69 percent). The difference, however, is remarkably small. Sources of financial support obviously are related to elderly persons' urban/rural residence, educational attainment, and occupation prior to age 60. The

elderly living in urban areas report good quality of life 7 percentage points higher than their rural counterpart (77 percent and 70 percent, respectively). Same percentage differences exist between those with and without completed elementary education. Eighty-two percent of the elderly who had professional or government jobs report good quality of life, much higher than those with other types of occupation.

(Table 2 about here)

Physical condition is positively associated with quality of life. The elderly who have active ADL status are not so different from those who are mildly disabled (73 percent), but severely disabled elderly persons report much lower percentage of good quality of life (63 percent). As mentioned earlier, possibly due to selectivity, the older an elderly person is, the higher the quality of life (72 percent among 80-89 years olds and 77 percent among 100-110 year olds). Whether they ever had children affects their quality of life. The elderly who never had children have much lower percentage reporting good quality of life compared to those who had children (67 percent and 73 percent, respectively).

Predicting Quality of Life

We now turn to logistic regression models to further explore the impact of social support on quality of life when other variables are taken into account. We focus on how different types of social support affect quality of life – objective activities (measured by living arrangement), support from children (whether non-resident children pay them visits regularly), and perceived support (who would take care of them when they are sick). Table 3 presents the results from the logistic regression models. The first model includes living arrangement. We control for whether the elderly person ever had children or whether any of the children is still alive. This control is

needed in the first model because living arrangement is very much associated with whether an elderly person has children. The elderly living in nursing home are 2 times as likely to report good quality of life than the elderly residing with one of their children. The elderly living alone nevertheless are least likely to report good quality of life (60 percent less likely compared to those living with children). We have established the initial evidence that the elderly living in nursing homes have the best quality of life.

Whether non-resident children visit their elderly parents has a strong effect on quality of life for elderly parents. Interestingly, when this variable is taken into account, it no longer matters whether the elderly person has had own children or whether their children are still alive. What matters is the quality of the relationship – whether visited by children. The elderly are 40 percent more likely to report good quality life among those receiving children's regular visits than among those not receiving children's regular visits. The variable measuring perceived support is added in Model 3. The effect of perceived support is very strong compared to the effects of living arrangement and children's visits (objective activities). This is in agreement with the patterns found in developed countries (Turner and Marino 1994). In other words, the elderly who perceive that their family members would take care of them if they are sick are 3.2 times as likely to report good quality of life than those who perceive nobody would help him. When living arrangement is taken into account, the elderly who perceive support from family members has higher quality of life than the elderly who perceive support from non-family members, reversing the pattern seen in the bivariate relationship (see Figure 3).

(Table 3 about here)

Sources of financial support and ADL statuses are added in Model 4. The elderly who completely rely on their own or their spouses for financial security are most likely to report good

quality of life. The elderly who only count on government or other sources for support are 43 percent less likely to report good quality of life than the self-financed elderly. Clearly, for some elderly persons, social and financial capital accumulated over lifetime pay off. Their financial security may buy them independence and gain more respect from their children and peers, which is likely to lead into better quality of life. Undoubtedly, health status affects quality of life. Interestingly, mild disability (one or two activities such as eating, dressing, transferring, using the toilet, bathing, and continence are impaired) does not prevent an elderly person from enjoying a good quality of life. Quality of life only suffers when they have severe disability (three or more activities are impaired).

Urban/rural residence, age, educational attainment, and occupation status at retirement are included in Model 5. Most of these variables are measures of social structure. Good quality of life is 27 percent more likely for urban than for rural elderly people. Education effect only becomes strong when it comes to the difference between completed elementary education or not – The elderly with complete elementary education are 33 percent more likely to report good quality of life than the elderly with no schooling. Expectedly, former professional or government employees are 30 percent more likely to report good quality of life compared to former farmers or workers. These social structure variables clearly demonstrate the jobs and schooling the elderly had and where they live have an important effect on their perceived quality of life.

When other variables are taken into account, age effect remains strong. The elderly aged between 100 and 110 are 32 percent more likely and the elderly aged 90 to 99 are 19 percent more likely to report good quality of life compared to the elderly aged between 80 and 89. The positive effect of age is most likely reflective of the selective nature of the oldest old. Their

positive attitudes towards life are likely the root cause for their healthy longevity. Gender has a weak but still significant association with quality of life – Elderly women are 13.7 percent more likely to have good quality of life compared to elderly men.

When same variables are compared across models, it is clear that the regression coefficient for each variable remains quite stable. This means that all the variables introduced in the models have added effects to the predictions of quality of life and have non-significant interactive effects. The elderly living with children do not report highest quality of life. In contrast, the elderly living in nursing homes stand out to have the highest quality of life even when all other variables are taken into account. This indicates the importance of community support for the elderly. The elderly who reside with one of their children may not feel so free to talk with their children; intergenerational gaps may prevent them from having good communication with their family members; but nursing homes may provide an environment that they can share common interest and concerns. However, it may be too premature to conclude that nursing homes are an ideal living arrangement for the elderly. Selection effect may be hidden in this pattern. Quite likely, the elderly with certain personalities (easy going, open, etc.,) are more likely to live in nursing homes than the elderly with other kinds of personalities. Maybe it is the personality difference that causes the differences in quality of life for different living arrangements.

Unfortunately, the data do not permit us to get a clear picture of this potential selectivity effect. However, Table 4 provides us with a glimpse of those living in nursing homes. The elderly living in nursing home are more likely to have no children, depend on government and other sources for financial support, count on non-family members for support when they become ill, live in urban areas, and be in the age range 80-89 compared to those who do not live in

nursing homes. This profile suggests that the elderly living in nursing homes tend to be childless and depend on government support. Why do they have a better quality of life? This may be largely due to the impact of peers and friends who keep them in good company. It is also likely that their take on quality of life has different reference points. In Chinese society where elderly care is the responsibility of families and kinship, the elderly who have never had children may have been dreadful and pessimistic about their old age support. However, nursing homes provide them with food, shelters, and social networks. The old age security they have in nursing homes may make them think more positively and report high levels of social support.

(Table 4 about here)

In summary, we have found strong evidence of social support affecting quality of life among China's oldest old. Living arrangement, children's visits, and perceived social support are all strongly associated with quality of life. In addition, urban/rural residence and socioeconomic status of elderly play an important role. Although the elderly living alone and the elderly living in nursing homes have many of the characteristics in common, their quality of life is at two extremes, which suggests the importance of community support and peer influences in quality of life.

DISCUSSION AND CONCLUSION

Our objective has been to examine how various sources of social support affect quality of life for the elderly. We achieve this objective by analyzing the first wave of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) conducted in 1998. CLHLS is the very first survey that has a large number of the elderly aged between 80 and 110 (oldest old). The survey provides rich information about the oldest old on health, disability, demographic, family, socio-

economic, behavioral risk factors, and general well being. This survey, for the first time, allows us to examine the impact of social support on quality of life for this unique elderly population. Although previous literature on social support is voluminous, most are limited to developed countries. Our study fills the gap by providing new evidence from a developing country about the impact of social support on quality of life. This is an important endeavor given that population aging is rapid in many developing countries where social and financial security for the elderly is not yet in place. We center on how objective behaviors (living arrangement and children's visits) and subjective perceived social support (who would take care of them when they are sick) affect quality of life differently.

The increase in aging population around the world has made it an important goal to maintain and improve quality of life for the elderly. China is one of the countries that have the fastest growing aging population. This growth is largely due to the decline in fertility and the increase in life expectancy. The successful implementation of the one-child family policy undoubtedly pushes the future generations to face tremendous elderly-care responsibilities. Meanwhile, the long-held social norm that adult children reside with elderly parents is likely to change as a result of small family size and cultural change. The fertility decline, socioeconomic growth, and cultural change suggest that China is well on its way to follow the patterns of many developed countries in living arrangement. More and more elderly people will live on their own away from their children. This trend is already starting to occur in urban areas and is likely to pick pace in the years to come.

More elderly persons living on their own are likely to weaken social support from family members. Our analyses have recognized that social support is multi-dimensional and the elderly benefit from all dimensions of social support. Where the elderly live indicates the kind of

support, if any, they will receive. While majority of the oldest old live with one of their children, over one fifth of the elderly live only with their spouses, alone, or nursing homes. The bad news is that the elderly living alone or only living with spouse have much lower levels of quality of life, but the good news is that the elderly living in nursing homes have the highest quality of life. Relationships with friends and peers are more positively associated with quality of life than relationships with family members (Wood and Robertson 1978; Ellison 1990). Community attachment and peer interactions are critical to foster good quality of life for the elderly.

Comparing the elderly living alone with the elderly living in nursing homes, we can tell that these two groups are similar in many ways but differ in perceived social support and sources of financial support. The elderly who live alone do not perceive that they would get care if they get sick and are less likely to receive support from government and sources. Living alone does not seem to be a viable option for the elderly unless care and financial security can be guaranteed. In contrast, the elderly living in nursing homes enjoy even better quality life than the elderly residing with one of the children. Does it mean that the elderly would have better quality of life if they moved out of their children's house? We cannot definitively answer this question unless we design an experiment with random assignment. However, we can get a sense of the answer to this question by comparing the elderly living in these two arrangements. For one thing, one reason that the elderly living in nursing homes have good quality of life is the availability of the peer networks. Regular interactions with peers and friends are likely to help elderly maintain their positive attitudes towards life by sharing their common interests and dealing with common concerns. This factor does not seem to be the only factor that causes the difference in quality of life between the two arrangements. Another factor is selectivity. The elderly living in nursing homes tend to have no children and depend on government and other sources for financial

support. The elderly with children would not enjoy the same perceived levels of quality of life if they lived in nursing homes. Their quality of life may be more dependent on their relationships with their family members and support from their children.

Indeed, for the elderly with children, our analyses show that quality of life does not so much depend on whether they have children but on whether their children are in their daily lives. For these elderly people, frequent visits by children and the perception of these children being available when they are sick increase quality of life. Family networks are important to them. On the surface, children's visits may indicate that their children are in regular contact with them. Deep down, they may indicate that children of the elderly care for one another, the large extended family is united and harmonious, and the elderly receive reverence from their descendants – which usually matter so much more to the quality of life for the elderly.

Our analysis shows the importance of social support on quality of life for China's oldest old. Fast pace of aging in China may suggest in the near future the difficulties for the family to shoulder all the responsibilities to care for aging parents. While a social security system needs to be in place to provide financial security for the elderly, nursing homes or retirement communities may be a viable option. The elderly in our study do benefit networks of peers and friends in their elderly years. These networks and communities can regularly facilitate interactions and communications among the elderly and provide a support system for them, which seem to be an important key to a good quality of life for the Chinese elderly.

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Figure 1. Percentage of the Elderly Reporting Good Quality of Life by Living Arrangement

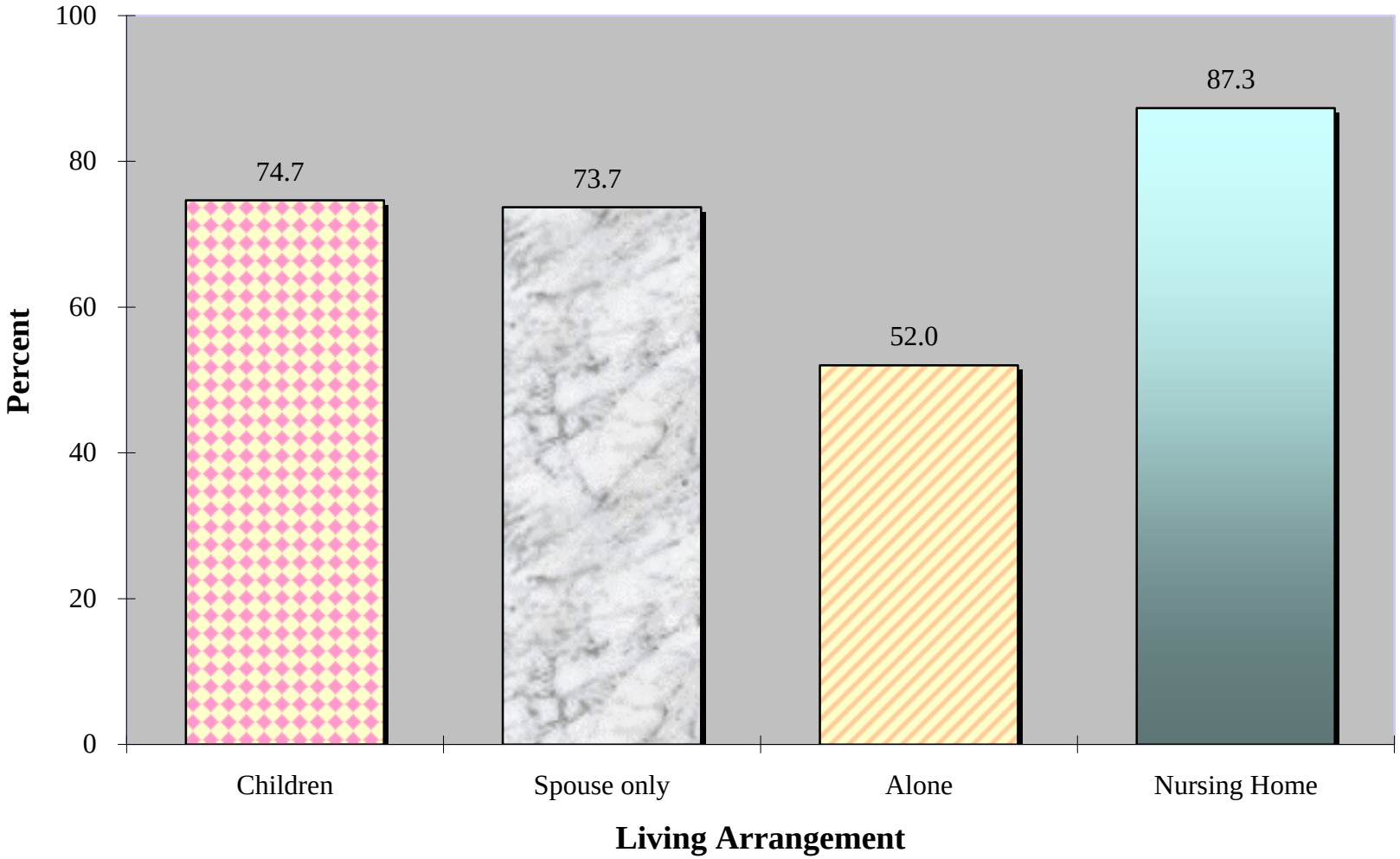

Figure 2. Percentage of the Elderly Reporting Good Quality of Life by Whether Non-Resident Children Visit

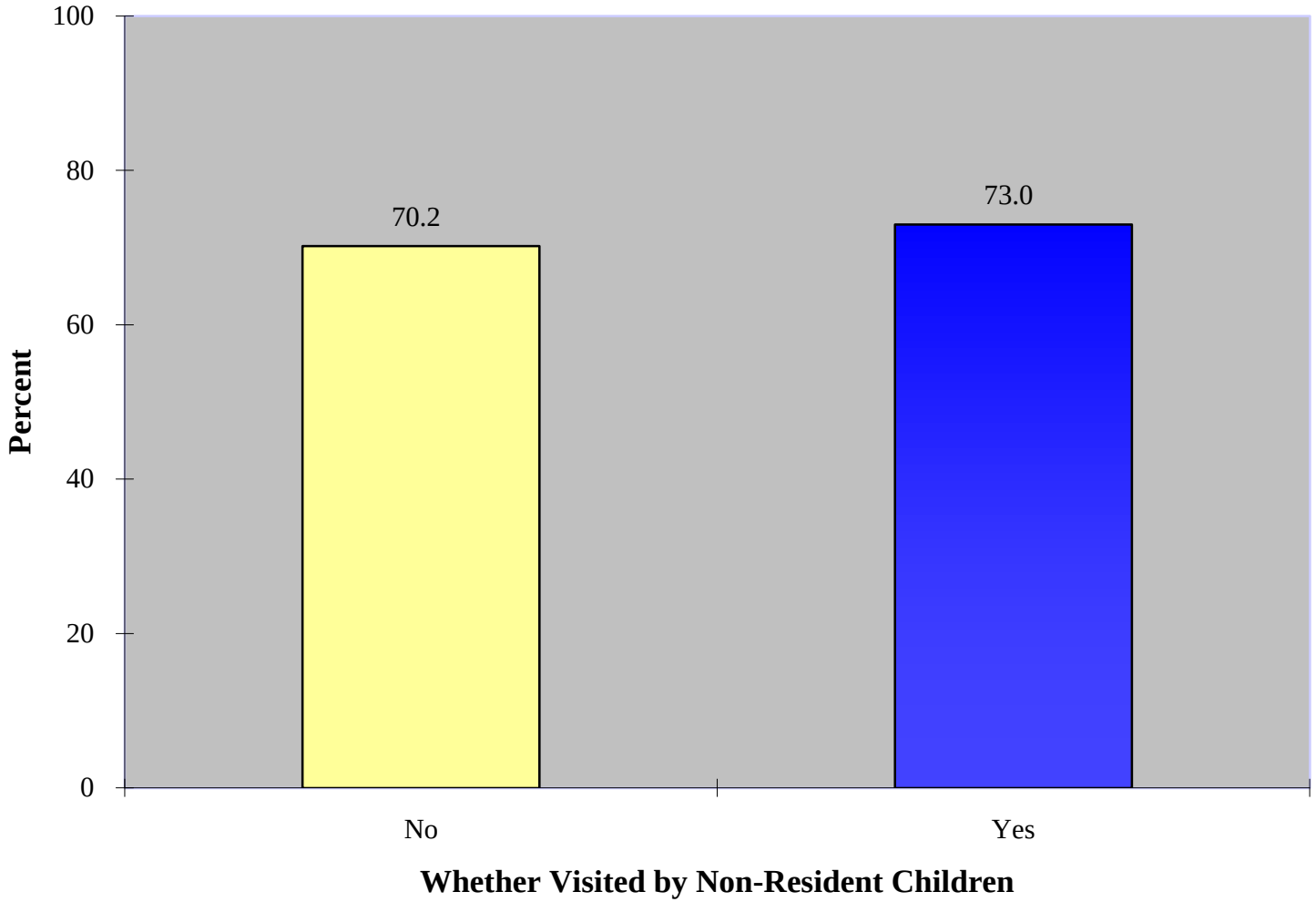

Figure 3. Percentage of the Elderly Reporting Good Quality of Life by Sources of Percieved Support

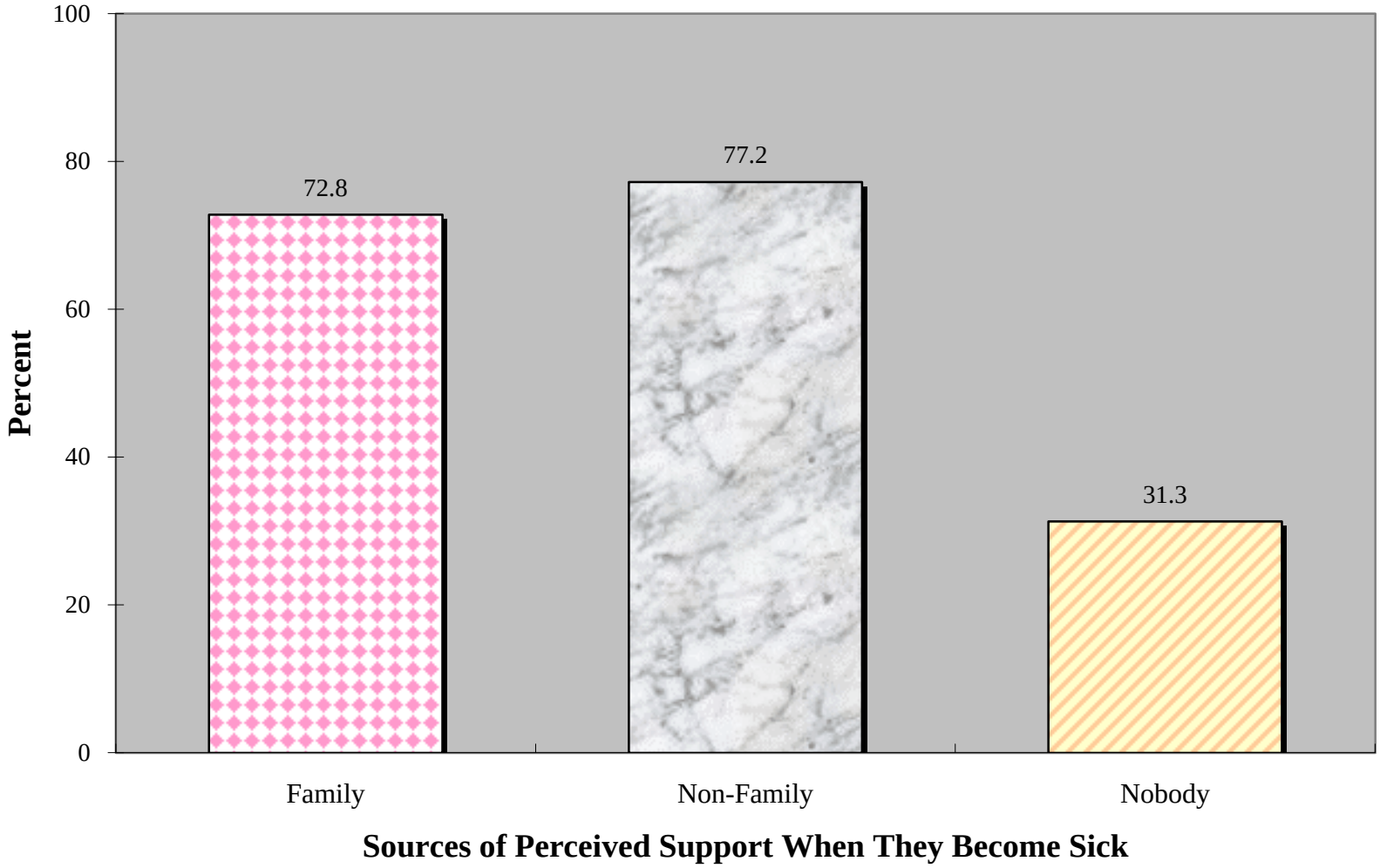

Table 1. Descriptive Statistics, Weighted, CLHLS 1998

Variable	Percent
Total	7871
% reporting good quality of life ……	72.3
Demographic Characteristics:	
Age	
80-89	90.7
90-99	7.9
100-110	1.4
% Female ……	63
Education	
No Schooling	62.9
1-6 Years of Education ……	26.7
6+ Yeas of Education ……	10.4
Occupation	
Professional or Governmental ……	9.5
Worker or Famer ……	71.5
Housework or others	19.1
% Urban ……	37.2
No Children Ever Born ……	5.0
At Least One Child Alive ……	80.9
Physical Conditions	
ADL	
Severe Disability	5.9
Mild Disability ……	12.2
Active ……	81.9
Social Support	
Living Arrangement: (Reference= Alone)	
Child Only……	67.1
Spouse Only……	12.5
Nursing Home ……	6.8
Alone ……	16.6
Financial support	
Own or Spouse	11.3
Children and Relatives……	58.7
Government and Others ……	5.3
Own, Spouse, and Kins ……	16.7
All Sources ……	8.0
Frequent Visits ……	75.0
Caretaker when sick: (Reference= Nobody)	
Family Members ……	89.8
Non-family Member ……	8.2
Nobody ……	2.0

Note: The percentage for each variable (more than two categories) should add up to 100, but may not due to rounding errors.

Table 2. Percentage of the Elderly Reporting Good Quality of Life by Selected Variables, Weighted

Select Variables	% Reporting Good Quality of Life
*Living Arrangement****	
Child	74.6
Spouse Only	73.7
Alone	52.0
Nursing Home	87.3
*Frequent Visits***	
No	70.2
Yes	73.0
*Perceived Support When Sick****	
Family Members	72.8
Nonfamily Members	77.2
Nobody	31.3
*Financial Support****	
Own and Spouse	77.6
Child and Relatives	71.3
Government and Others	68.8
Own, Spouse and Kins	73.6
All Sources	71.5
*ADL Status****	
Active	72.9
Mild Disability	72.7
Severe Disability	63.1
*Place of Residence****	
Rural	69.7
Urban	76.8
*Education****	
No Education	71.0
1-6 Years	73.0
6+ Years	78.5
*Occupation at Retirement****	
Professional or Governmental	82.4
Industrial or Agricultural	70.6
Housework or Others	73.8
*Age**	
80 - 89 years	72.0
90 - 99 years	75.5
100 -110 years	77.1
*Having Child****	
No	66.8
Yes	72.6
Child Alive	
No	71.2
Yes	72.6
Sex	
Male	72.3
Female	72.3
Total	7871

***p<.01; **p<.05; *p<.01 (two-tailed)

Table 3. Odds from Logistic Regression Predicting Effects of Social Support, Health,and Demographic Characteristics on Quality of Life, 1998 (n=7,871)

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Living Arrangement (Reference= Childiren)					
Spouse Only	.76***	.75***	.76***	.66***	.70***
	(.07)	(.07)	(.07)	(.06)	(.07)
Nursing Home	2.00***	2.01***	2.25***	2.36***	2.41***
	(.30)	(.30)	(.45)	(.50)	(.52)
Alone	.40***	..40***	.44***	.42***	.44***
	(.03)	(.03)	(.04)	(.04)	(.04)
No Children Ever Born (Yes)	.80	.80	.86	.83	.87
	(.12)	(.11)	(.13)	(.12)	(.13)
At least one child alive (Yes)	1.30***	.97	.97	.94	.90
	(.09)	(.11)	(.11)	(.11)	(.10)
Regular Visit of Children (Yes)		1.40***	1.35***	1.38***	1.48***
		(.14)	(.14)	(.14)	(.15)
Caretaker When Sick (Reference= Nobody)					
Family Members			3.20***	3.52***	3.48***
			(.75)	(.84)	(.84)
Nonfamily Members			2.72***	2.96***	2.68***
			(.73)	(.81)	(.74)
Financial Support (Reference= Own)					
Children				.62***	.76**
				(.07)	(.09)
Government				.57***	.67**
				(.11)	(.13)
Own and Children				.73*	.81**
				(.09)	(.10)
All sources				.72***	.81
				(.09)	(.11)
ADL (Reference= Severe disability)					
Active				1.32***	1.48***
				(.10)	(.11)
Mild Disability				1.43***	1.45***
				(.13)	(.13)
Urban (Yes)					1.27***
					(.08)
Age (Reference = 80-89)					
90-99					1.19***
					(.08)
100 and higher					1.32***
					(.10)
Female (Yes)					1.14**
					(.08)
Education (Reference = no schooling)					
1-6 years of schooling					1.14*
					(.08)
6 and more years of schooling					1.33**
					(.16)
Occupation (Reference=worker or farmer)					
Professional					1.30**
					(.17)
Housework					1.22***
					(.09)
N	7871	7871	7871	7871	7871
Degree of freedom	5	6	8	14	22
LR chi2	203	214	240	284	348

Note : Standard errors are shown in parentheses.
***p<.01; **p<.05; *p<.1 (two-tailed)

Table 4. Odds from Logistic Regression Predicting Whether Living in Nursing Homes

Independent Variables	**Odds**	**Standard Error**
No Child	2.24***	.63
Child Alive	1.37	.54
Financial Support (Reference= Own and Spouse)		
Child and Relatives	1.22	.41
Government and Others	7.18***	2.41
Own, Spouse and Kins	1.42	.48
All	2.24*	.78
Visit	1.63	.59
ADL (Reference= Severe disability)		
Active	.60*	.16
Mild Disability	1.20	.38
Caretaker When Sick (Reference= Nobody)		
Family Members	.48	.36
Nonfamily Members	98.19***	73.21
Urban	5.25***	1.06
Age 90-99	.42***	.09
Age 100-110	.32***	.09
Female	1.10	.25
1-6 yrs Education	1.49*	.35
6+ yrs Education	.96	.33
Professional	.46*	.16
Housework or Others	.51**	.13
N	7871	
Degree of freedom	19	
LR chi2	2148.62	

Note: ***p<.01; **p<.05; *p<..1 (two-tailed)