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## Household Context and Subjective Well-Being Among the Oldest Old in China

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### Abstract

This article investigates the importance of household context to subjective well-being among the oldest old (aged 80 years and older) in China. Using data from the Chinese Longitudinal Healthy Longevity Survey, the authors find that living arrangements have strong implications for elderly emotional health. First, living alone is associated with lower subjective well-being. Second, coresidence with immediate family (spouse or children) is associated with positive subjective well-being. Third, compared to living with a son, the traditionally dominant type of living arrangement, coresidence with a daughter appears positively linked to the emotional health of the oldest old. Results highlight the importance of family and cultural context to subjective well-being of the oldest old. They also suggest that the gendered nature of caregiving merits further attention in China and other patrilineal societies.

### Keywords

living arrangements; family; subjective well-being; aging; caregiving; gender; China

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The linkage between the social relations of older adults and their well-being has been studied extensively in the social science literature (Grundy, Bowling, & Farquhar, 1996; Hanson, Isaacsson, Janzon, & Lindell, 1989; House, Landis, & Umberson, 1988). Among a network of social ties, the household provides a crucial context where household members enjoy varied levels of social integration as well as emotional and instrumental support, promoting good health outcomes (Antonucci, 1990; Hughes & Waite, 2002). At the same time, relations between household members can create tensions, and they may involve unpleasant interactions and can therefore be damaging to individuals' well-being (Rook, 1984; Rook & Pietromonaco, 1987). Parallel to the conceptual uncertainty of the relationship between living arrangements and health outcomes is a mixed range of results from empirical studies. For example, some studies suggest that coresidence with children is beneficial, whereas others find it detrimental to elderly well-being (Sarwari, Fredman, Langenberg, & Magaziner, 1998; Zunzunegui, Beland, & Otero, 2001); some find that living alone disadvantages individuals on a range of health measures, whereas others indicate that it does not pose any risk to an elder's mental and physical well-being (Lawton, Moss, & Kleban, 1984; Wang, Snyder, & Kaas, 2001).

Aside from the conceptual and methodological challenges of sorting out the relationship between living arrangements and elderly well-being, additional complexity is added by the strong social and cultural norms that prescribe roles for family members. Variation across societies in expectations and obligations associated with these roles means that the same type of living arrangement can have different implications in different settings. In this article, we focus on the subjective well-being of elders in China, where strong normative expectation is that children—especially, sons—provide support to aging parents, and the reality is that the majority of aging parents live with children. Given these norms and practices, we expect that living with children will be positively associated with well-being.

Our analysis focuses on the oldest old, those 80 years and above. Since the 1980s, there has been growing recognition that the elderly population, typically defined to be those 65 and older, is heterogeneous and that the growing oldest old population is in need of study (Suzman, Willis, & Manton, 1992). In China, an aging society, the share of the population that is 80 or older is growing especially fast. In 1964, 3.6% of the population was 65 or older (Liang, Tu, & Chen, 1986). By 2000, this percentage increased to 7%, and United Nations projections suggest that it will be between 16% and 23% by 2050, given medium fertility and mortality assumptions (Zeng & Vaupel, 2002; Zeng, Vaupel, Xiao, Zhang, & Liu, 2002). Between 2000 and 2050, the average annual predicted growth rate for Chinese 65 and older is 2.7%, and for the oldest old alone, it is 4.4% (Zeng et al., 2002).

Although an extensive literature documents trends in living arrangements, determinants of living arrangements, and implications of living arrangements for patterns of intergenerational support in East Asian countries (Freedman, Thornton, & Yang, 1994; Natividad & Cruz, 1997; Weinstein, Sun, Chang, & Freedman, 1994; Whyte, 2003), far less research attends to the connection between living arrangements and older adult health. Indeed, because those who are living with family are more likely to receive support than those who are not, living arrangements have been assumed to be an indicator of elderly well-being (see discussion by Zimmer, 2005). In this article, we directly examine this assumption by exploring the association between household composition and older adult well-being. Specifically, we consider a dimension of health: subjective well-being, or emotional health. We might expect that household context is critical for the oldest old, given that they can be mentally and physically especially vulnerable and may be least able to live independently (Zeng et al., 2002).

Using data from the Chinese Longitudinal Healthy Longevity Survey (CLHLS), we begin by documenting patterns of living arrangements among the oldest old in 1998. Subsequently, we do cross-sectional analyses to compare the subjective well-being of those who live with immediate family (children or spouse) to that of those who do not. Then among those who live with immediate family, we investigate the relationship between type of family connection and well-being. How important is living with a spouse relative to living with a child? And among those who live with children, we explore whether living with sons, the traditionally preferred type of living arrangement, holds any advantage with respect to well-being when compared to living with daughters. Last, we use data from two points in time and fixed-effects models to explore whether changes in living arrangements in a 2-year interval are associated with changes in subjective well-being.

## Background

Our article starts from the theoretical premise that the relationship between living arrangements and well-being is shaped by normative ideas about family responsibilities and associated preferences regarding living arrangements. In some societies, such as the United States, many older adults prefer to live independently. In other settings, where demonstration of filial piety is important and coresidence with adult children is normative, older persons may be more likely

to find living alone undesirable. Thus, the same living arrangement may have different health implications across societies (e.g., Krause & Liang, 1993).

China is a country with a strong tradition of extended family and of patrilineal and patrilocal living arrangements. This tradition is attributed to Confucian doctrines that emphasize children's filial obligation to their parents, particularly, that of sons. Strict interpretation requires that a daughter's obligations to her parents end at marriage. She might maintain emotional closeness but nonetheless needs to transfer filial responsibilities to her husband's parents. It follows that parents expect to live with at least one of their sons and to depend on them for old age support.

However, in recent decades, especially in urban areas, expectations and preferences regarding living arrangements are varied. For example, a study in the 1990s based on major cities in China found that many parents would prefer not to live with a married son if situations allowed (Logan & Bian, 1999). In terms of provision of support, a study of Baoding, China, documented that grown daughters are just as likely to provide support as grown sons are (Whyte & Xu, 2003). However, although dramatic changes in Chinese society have occurred, traditional family forms have been remarkably resilient (Guo, 2000; Lavelly & Ren, 1992; Zeng & Wang, 2003). In 2000, more than 60% of those older than 65 shared a residence with children (Zeng & Wang, 2003), a figure considerably higher than that of most Western countries (United Nations, 2005). Moreover, survey data from the 1990s indicate that living with sons remained prevalent, even if living with daughters became more desirable and more common (F. Chen, 2005; F. Chen, Short, & Entwisle, 2000; Whyte, 2003; Zhan & Montgomery, 2003).

To be certain, continuity and change in family forms reflect more than cultural practices derived from Confucian doctrines. The organization of the socialist market economy, housing constraint, land and housing allocation processes, the history of restrictions on internal migration, and other factors are likely relevant to observed living arrangement patterns. For example, older persons in urban areas are much more likely to receive retirement income than those in rural areas. They may also have better access to health insurance programs and health care facilities (Gu, Zhu, Chen, & Liang, 1995), although urban benefits accrue more easily to men than to women. Given the myriad of differences between urban and rural China, we are careful to attend to place of residence in our analyses.

Additionally, because our approach is built around the premise that the relationship between living arrangements and well-being is shaped by normative ideas about family responsibilities and associated preferences regarding living arrangements, we are attentive to a critical tension that emerges in the study of this relationship. Coresidence with a son does not mean care by a son. Domestic work, including caregiving, is disproportionately done by women in China. Thus, living with a son may well imply care by a daughter-in-law. It is conceivable that care received from a daughter is qualitatively different from that received from a daughter-in-law, and it may be that the close emotional bond between a daughter and her parents benefits subjective well-being. However, it is also possible that patrilineal culture in China, which specifies that a daughter-in-law has primary obligations to her husband's parents, guides a daughter-in-law's activities and relationship with her in-laws, rendering any difference between a daughter and daughter-in-law trivial (Cooney & Di, 1999). Even if differences in emotional closeness are real, they may have little relevance for the outcomes that we study. In the United States, men and women report more closeness to parents than to parents-in-law (Rossi & Rossi, 1990), but according to one study, this difference does not translate into much difference in the care of older parents by adult children (Peters-Davis, Moss, & Pruchno, 1999).

## Previous Studies on the Effect of Living Arrangements on Elderly Well-Being

In studies of the relationship between household structure and older persons' health, researchers consider a range of health outcomes, including subjective well-being, functional status, disability, and mortality. Regardless of the measures used, the overall picture of the effect of living arrangements on elderly well-being is less than clear. The only exception is the consistently positive effect of the presence of a spouse on physical health (Lilliard & Waite, 1995; Waite & Hughes, 1999). Marriage is said to benefit health because it increases household economic resources, promotes healthy behaviors, and provides emotional and instrumental support that are necessary for a successful aging process (Waite & Gallagher, 2000).

Outside marriage, empirical results are largely mixed, particularly in regard to the relative benefits of coresidence with children versus living alone. Theoretically, older adults who live alone are more vulnerable to social isolation, to the detriment of their health. Studies in the United States provide limited support for this hypothesis. For example, Waite and Hughes (1999) found that living alone led to lower levels of physical, cognitive, and emotional functioning for a cohort of individuals aged 51–61 who were experiencing a transition from middle age to old age. Similarly, Dean, Kolody, Wood, and Matt (1992) found that individuals older than 50 who lived alone were more susceptible to depression than those who did not live alone. A salient negative effect of independent living on elderly health was found in other countries and regions where coresidence with children was the norm. For example, a study of rural Taiwanese elders found that living alone was associated with much higher levels of stress, when compared with other types of living arrangements (Wang et al., 2001). In a study based in the province of Henan, China, Cui (2002) found that elderly who were living alone were disadvantaged in all measures of physical, mental, and social well-being. Furthermore, more than 80% of the elderly who lived alone reported that they would have liked to live with other family members, thereby suggesting that independent living was forced rather than chosen.

However, other studies suggest the opposite; that is, elders who live alone are reportedly healthier than those who live with others (Lawton et al., 1984; Magaziner, Cadigan, Hebel, & Parry, 1988; Magaziner, Yuhas, & Day, 1986). Many of these studies received methodological criticism on the basis that it is impossible to eliminate possible selection effects with cross-sectional data; perhaps, elderly who live alone are a healthier group at the start. Nonetheless, some longitudinal studies in the United States confirmed the positive findings. For example, a study based on the Longitudinal Study on Aging found that living alone does not increase mortality risks among either men or women (Davis, Moritz, Neuhaus, Barclay, & Gee, 1997). Using data from a prospective survey of a group of elderly White women from Baltimore from 1984 to 1989, Sarwari et al. (1998) suggested that living alone is protective against functional status deterioration. Furthermore, a prospective study of 4-year change for women aged 60–72 years in the Nurses' Health Study documented that women living alone have lower risk of decline in mental health and are neither socially isolated nor at any increased risks for decline in functional status (Michael, Berkman, Colditz, & Kawachi, 2001).

Similarly, the effect of coresidence with children on elderly health seems to be uncertain and conditional on other factors. A longitudinal study of three-generation families in California (1985–1988) found that coresidence with children can be detrimental to the psychological well-being of elders, except in times of crisis (Silverstein & Bengtson, 1994). Lilliard and Waite (1995) found that unmarried women living with children experience higher mortality than do comparable married women. However, using data from the Health and Retirement Survey, Waite and Hughes (1999) and Hughes and Waite (2002) found no difference between married couples living alone or with children in a number of health outcomes, including self-rated health, functional status, and depressive symptoms; yet, they did find that single women living with children appear disadvantaged in all outcomes.

In cultural contexts where intergenerational ties are traditionally strong and coresidence with children is common, living with children seems to be beneficial to elderly health. A 1993 study of elderly older than 65 in Spain reported a coresidence rate as high as 45% and found that it was associated with good self-rated health and low prevalence of depressive symptoms (Zunzunegui et al., 2001). Similarly, in East Asian countries, where extended family is culturally dominant, a positive effect of coresidence with children on health was reported by Wang et al. (2001) in rural Taiwan and Cui (2002) in Henan, China.

We ask whether a positive association between coresidence with children and subjective well-being exists among a sample of oldest old adults in most provinces of China. Our expectation, given a theoretical orientation that prefers normative family context, is that living with family is better than living alone in China. In addition, because norms regarding filial piety remain strong, we expect that living with children will be positively related to well-being. We explore the implications of living with children through a variety of comparisons—namely, living with a spouse and children, living with children without a spouse, or not living with children at all. Furthermore, given that normative family context by and large prefers living with a son, we explore the relative importance of living with a son or daughter.

The focus on subjective well-being is significant. Research on living arrangements typically focuses on its connection to functional status and mortality (for exceptions see X. Chen & Silverstein, 2000; Sun, 2004). By focusing on subjective well-being, the problem of endogeneity should be reduced. Although physically weaker older persons may have needs that lead to living arrangements, it is less clear that individual happiness drives differences in living arrangements.<sup>1</sup> Subjective well-being is more plausibly a consequence of living arrangement rather than a cause, although the possibility of reverse causation cannot be ruled out.

## Data: CLHLS

We use data from CLHLS, “the first large survey of the oldest old conducted in a developing country” (Zeng et al., 2002, p. 252). The data were collected by Peking University’s Center for Healthy Aging and Family Studies and the China National Research Center on Aging, with support from the U.S. National Institute on Aging. The CLHLS was undertaken in 631 randomly selected counties and cities of the 22 provinces in China (Liaoning, Jilin, Heilongjiang, Hebei, Beijing, Tianjin, Shanxi, Shaanxi, Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangdong, Guangxi, Sichuan, and Chongqing). It covers roughly half the counties and cities of those provinces, and the sample areas represent 85% of the total population of China. In the 1998 baseline survey, 9,073 oldest old persons (aged 80 and older) were interviewed. In 2000, 4,844 of those elders were reinterviewed, and 6,372 elders were newly added interviewees. For detailed description of the data, see Zeng et al. (2002).

Our analysis focuses on a sample of 7,534 oldest old persons in 1998. About 15% of the respondents in the original sample are not included, because of their inability to answer the questions related to subjective well-being. As expected, this is strongly associated with age and health. After controlling for other individual characteristics, we confirmed that the missing pattern was not selective by living arrangements. About 1% of our sample of oldest old had either never married or had married but had no children. We excluded them from analysis and confirmed that our results are not sensitive to this choice.

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<sup>1</sup>Indeed, bivariate analysis with our data show that self-reported health varies little by living arrangements (results not shown).

## Living Arrangements of the Oldest Old

Table 1 shows the living arrangements of the oldest old in the CLHLS sample for urban and rural areas in 1998. The overwhelming story is one of coresidence with a child. The majority of the oldest old, more than half in urban areas and nearly two thirds in rural areas, lived with a son or daughter. This urban–rural difference is expected because rural elders are more dependent on their children for support in the absence of a pension system. Significantly, most of those living with at least one child are not living with a spouse. Less than 10% of the oldest old in either urban or rural China live with a spouse and child.

Despite near-universal marriage and a low prevalence of divorce in China, by the time that the oldest old reach age 80, only 22% of them live with a spouse in urban areas and 14% in rural areas. Living with a child, whether one's spouse is present or not, often means living with a son. About half the oldest old overall live with a son (42% in urban China and 60% in rural China), whereas less than a fifth live with a daughter and no son (17% in urban areas and 8% in rural areas). This pattern is consistent with the legacy of the patriarchal and patrilocal tradition in China. In addition, the greater likelihood of living with a daughter in urban areas is consistent with the finding of earlier studies reporting changes to the patrilocal norm in urban China (Whyte & Xu, 2003). Notably, Chinese patterns of coresidence differ from patterns observed in Western countries, where coresidence with daughters is more common than that with sons (Aquilino, 1990; Coward & Cutler, 1991; Crimmins & Ingegneri, 1990).

Finally, Table 1 indicates that slightly more than a quarter of the urban and rural samples do not live with a spouse or a child. Roughly 10% live alone. Others live in nursing homes. Living in a nursing home is still relatively uncommon in China, though much more prevalent in urban areas when compared to rural areas (10% versus less than 2%), where in the former facilities are more likely to exist. For many, nursing home use is still largely stigmatized; children who have a parent in a nursing home are often regarded as being unfilial. Last, a substantial fraction of the oldest old who are not living with a spouse or child do not live alone or in a nursing home; specifically, about 10% of urban Chinese oldest old and 15% of rural oldest old live with others.

## Subjective Well-Being for Elderly in the CLHLS

The CLHLS includes a series of questions on the elder person's life evaluation. Those most related to subjective well-being are as follows:

1. How do you rate your life at present?
2. Do you always look on the bright side of things?
3. Are you as happy now as when you were younger?
4. Do you often feel fearful or anxious?
5. Do you often feel lonely and isolated?
6. Do you feel the older you get the more useless you are?

The responses range from 1 (*always or very good*) to 5 (*never or bad*). We rearrange the order of the responses so that for all the items, the 1 value suggests the weakest feeling and the 5 value, the strongest feeling. An exploratory factor analysis was performed on these six items, which generated two factors, with the first three items loading onto one and the latter three loading onto the other (results not shown). Because the CLHLS data were not collected to study the psychological well-being of the oldest old, these items are not perfect indicators. A review of literature on subjective well-being of older adults shows that sophisticated instruments have been developed and cross-validated to assess perceptions of well-being. Examples include the

20-item Life Satisfaction Index, the 21-item short version of the Philadelphia Geriatric Center Morale Scale, the 20-item Center for Epidemiologic Studies Depression Scale, and the 10-item Affect Balance Scale. Although the items in the CLHLS survey are not associated with one of these established indices, they represent important dimensions of subjective well-being, such as life satisfaction, happiness, and loneliness. Importantly, the CLHLS indicators provide the first glimpse into subjective well-being and its determinants for this oldest old population.

Research has shown that negative affect and positive affect are independent phenomena and are both relevant to subjective well-being (Bradburn, 1969; Diener & Emmons, 1984). Given the factor analysis and this previous work, we created two indices, one for positive well-being and the other for negative well-being. We added Items 1-3 to create an index of positive well-being, which ranges from 4 to 15, with higher numbers indicating better well-being. The index of negative well-being is an aggregation of Items 4-6, the values of which range from 3 to 15, with higher values indicating worse well-being. The internal consistency coefficients for the two indices are  $\alpha = .56$  and  $\alpha = .60$ , respectively. Although indices on subjective well-being used in the psychology and epidemiology literature typically have higher coefficients, they tend to be constructed from at least 10 to 20 items. Because alpha is known to be positively correlated to number of items used (Cortina, 1993), our indices are indeed reasonable, given that we use three items to construct each. Table 2 presents descriptive statistics on the indices of positive and negative well-being, as well as the items used to construct them.

## Analytic Strategy

In our analysis, we regress indicators of positive and negative well-being on living arrangements and a series of control variables. We control for sociodemographic characteristics, such as age and gender. We also control for whether one's spouse died in the past 2 years. We expect that recent loss of a spouse is associated with lower subjective well-being (Li, Liang, Toler, & Gu, 2005). We also control for human capital, including education and financial status (whether one supports oneself and one's spouse). Elderly who are economically independent are more likely to have a better assessment of their lives than are those who have to depend on their children for support. We control for self-reported health, given that better physical health is associated with better emotional health. Self-reported health is measured on a scale of 1 to 5, with the former indicating very bad health and the latter very good health. We also include three measures of family relationship: number of children, whether nonresident children visit frequently, and whether siblings visit frequently. We hypothesize that each of these, for the potential social connections that they offer, will be positively related to emotional health (X. Chen & Silverstein, 2000; Pei & Pillai, 1999; Sun, 2004).

In the analyses, first, we explore the importance of living with others and make distinctions among living with a spouse or children, living with others, and living alone. Next, among those who live with family, we investigate how subjective well-being is affected by living with a spouse, a child, or both. Finally, for the oldest old who live with children, we consider whether subjective well-being varies for those who live with a son compared to those who live with only a daughter.

Table 3 shows descriptive statistics on the independent variables. The urban oldest old are, on average, younger, more educated, and more likely to be married than their rural counterparts. In addition, urban oldest old are almost 7 times more likely to be economically independent than those in the rural areas.

## Results

Tables 4-7 present results from the ordinary least squares regression models on positive and negative well-being, and each table shows two specifications. The first includes variables related to living arrangements and the key demographic variables of age and sex, the second includes the full set of controls. Patterns of living arrangements, economic resources, and individual characteristics vary across urban and rural China, as indicated in Tables 1-3. Accordingly, we explored differences across urban and rural areas with a full set of interactions. However, assessments of model fit did not suggest the interactive specifications provided improvement over the additive specifications. Therefore, we combine the urban and rural samples in our presentation of regression results.

Table 4 considers the importance of living with others, and it distinguishes among those who live with a spouse or child, those who live alone, and all others. The results demonstrate a strong positive association between well-being and living with a spouse or a child compared to living alone. This effect is indicated in positive and negative dimensions of well-being. Likewise, living with others offers advantage compared to living alone. The magnitudes of the coefficients are similar for living with a spouse or child or living with others, thereby highlighting the negative association between living alone and subjective well-being.

Table 5 explores family effects in detail. Among those who live with immediate family, we distinguish between living with a spouse, a child, or both, and results show little evidence that subjective well-being varies by any of which. In this context, where normative expectations regarding late life include strong connection to children and a child's high sense of responsibility for parental well-being, living with children appears to rival living with a spouse in terms of subjective well-being.

Next, regarding those who live with children but no spouse (over half the sample), we asked, is living with a son associated with subjective well-being differently from living with a daughter and no son? For negative well-being, no difference emerges. However, for positive well-being, the oldest old who were living with daughters scored higher than did those living with sons (see Table 6). This result suggests that the often-described normative importance of living with sons does not trump all else. Late-life satisfaction may be better when one lives with a daughter; we suspect that gendered caregiving patterns may play a role in this result.

Finally, we include the full sample and a seven-category spectrum of living arrangements in Table 7. The results are consistent with those shown in Tables 4-6: Living alone is negatively associated with well-being; living with a spouse, children, or both is positively associated with well-being; and living with a son is not especially advantageous. When differences emerge, living with daughters is more positively associated with well-being among the oldest old.

The control variables are not the main focus of this article, but they do merit mention. Effects, where they exist, are consistent with expectation. Age is negatively associated with emotional health, exacerbating negative dimensions of subjective well-being. Net of other factors, men reported higher positive well-being and lower negative well-being. The effects of self-reported health, education, and financial independence are consistent across all samples and nearly all specifications. Net of other factors, better self-reported health is associated with more positive well-being and less negative well-being. Similarly, education and financial independence is associated with better emotional health. Finally, frequently visiting with children and siblings appears to support emotional health. The effects of visiting with children who live separately are in the expected direction in all specifications but attain significance ( $p < .05$ ) in the sample of all oldest old (Table 4) and not in the subsamples of oldest adults who live with spouses or children (Tables 5 and 6). The positive effects of visiting with siblings are consistent across all samples and specifications.



Overall, the cross-sectional results demonstrate a strong connection between living arrangements and subjective well-being. To explore these dynamics, we took advantage of the panel nature of the CLHLS. Adding data from 2000 to our 1998 sample, we estimated fixed-effects models. This approach allowed us to investigate how change in living arrangements is related to change in subjective well-being. These models do not suggest that change in living arrangements is associated with change in subjective well-being. Instead, it seems that change in self-reported health and death of a spouse are most important to change in subjective well-being over this 2-year period (tables not shown but available on request).

We must interpret these results cautiously. One reason is that as might be expected for a population 80 and older, a substantial fraction (41%) died over the 2-year interval. Our longitudinal analysis is thus restricted to those who survived and were followed up in 2000. A second reason is that among those still living, living arrangements changed relatively little during this window. Among the oldest old who were alive and in the sample both years—specifically, those living with spouses or children, those living with others, and those living alone—84% did not experience a change in living arrangements. This stability, though problematic for an analytic technique that depends on within-individual variation, is substantively interesting. Stories of “burdensome” parents being moved around to accommodate the modern lifestyles of middle-aged adults today might suggest more change. This result reminds us that our focus on the oldest old population may contribute to the stability that we observe; that is, children of the oldest old are near or in retirement themselves.<sup>2</sup>

Finally, in addition to addressing our fixed-effects models, we returned to our cross-sectional models and tested a host of interactions. We hypothesized that the effects of living arrangements on subjective well-being depend on whether a spouse has recently died, whether others visit frequently, and the self-reported health is, among other factors. We also thought that gender might be particularly important. However, we did not find support for any of the interactions that we explored, nor as mentioned earlier, did we find evidence of a difference by urban or rural residence.

## Discussion and Conclusion

The family household is the traditional social institution where older persons are cared for in East Asian countries. As a result, declining trends in coresidence with children has raised alarm among researchers and policy makers alike. Many believe that preserving the family system is in the government's and older persons' best interests. Although governments may promote family responsibility for old-age care for economic reasons, researchers have not systematically considered the multifaceted implications of such promotion. In particular, are older adults better off living with their children? If coresidence does not promote older persons' well-being, efforts to uphold the tradition may be shortsighted. Regarding other settings around the world, where privacy and independence are more highly valued in the aging process, there are indications that coresidence with children is not necessarily the optimal living arrangement and that independent living may indeed be more beneficial. Likewise, in transitional societies where cultural norms are shifting, family living arrangement may not always be the most desirable (see discussion by Hermalin & Yang, 2004).

Despite the dramatic societal changes that have occurred in China in recent decades (e.g., the communist revolution, the cultural revolution, the one-child policy, and the economic reforms), the patrilineal extended family persists. As evidenced in the CLHLS and elsewhere, the

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<sup>2</sup>An alternative interpretation of the fixed-effects results is that unobserved heterogeneity that results from factors related to living arrangements and subjective well-being accounts for the relationships initially observed. The change in sample over time complicates this interpretation as well.

majority of the oldest old in China live with their sons. At the same time, there are numerous signs of change (Logan & Bian, 1999; Whyte, 2003). Our study shows that a sizable percentage of the oldest old—particularly, those in urban areas—live with a daughter. Hence, in a society where old customs meet rapid economic change, can we assume that the traditionally preferred living arrangement still benefits older persons' well-being (assuming that it once did)?

The answer to the above question is not a simple yes or no. If we define a traditional living arrangement as an extended family household, the answer is a qualified yes. Our analysis clearly indicates that living with children is better than living alone in both dimensions of subjective well-being; however, so is living with others. This result suggests that it is living alone that is most salient and problematic. This result differs from results in United States, where living alone can be beneficial to elderly health. It is striking that there is little indication of difference in emotional health for older persons who live with a spouse or with children, controlling for other socioeconomic and demographic characteristics. Unlike research in the United States, where the effect of coresidence with children on health was often found to be negative and where living with a spouse (marriage) was consistently documented to be the superior living arrangement for old-age health, we find that living with children offers similar benefit in China. We believe that these findings denote a strong display of cultural continuity, where an emphasis on filial obligation creates parent-child bonds that rival those among spouses in their benefits to health. More generally, they point to the importance of context.

Nonetheless, if we define a traditional living arrangement as coresidence with a son, then our answer to the same question (can we assume that a traditional living arrangement provides benefit to health?) is a no. The dominance of patrilocal residence stands in sharp contrast to the results of our multivariate analysis on subjective well-being. Living with a daughter may have advantages when compared to living with a son in its association with positive well-being for the oldest old in China. This daughter advantage represents a significant departure from the patrilineal tradition, which accorded sons responsibility for aging parents. Significantly, this finding confirms results from previous studies, which have begun to document deviation from patrilineal norms in China. For example, we now know that coresiding maternal grandparents play a potentially important role in providing child care (F. Chen et al., 2000). Additionally, Whyte and Xu (2003) have documented that in Baoding, China, married daughters felt as responsible for their parents as did married sons.

What contributes to this daughter paradox? We believe that the answer lies in caregiving patterns and household dynamics. As in most places around the world, women in the family in China are most responsible for caregiving, whether for young children or for aging parents (Short, Zhai, Xu, & Yang, 2001; Zhan & Montgomery, 2003). A daughter may be (or may be perceived to be) more nurturing, caring, and attentive to the needs of parents than a daughter-in-law may be, which may help to promote the well-being of oldest old adults. Historically, a daughter is not obligated to take care of her parents; however, the emotional tie between a daughter and her natal family remains throughout life. As part of the Confucian doctrines, stories and heroic deeds of filial daughters are recorded and have been preached to generations of women. Thus, although living with a daughter is a relatively new phenomenon, the emotional bonding between daughters and parents and the sense of obligation that daughters hold toward their natal parents is far from a modern invention.

In contrast, household dynamics in a patrilineal extended family today are quite different from their historical counterpart. Historically, the patriarch had absolute authority in the family. The mother-in-law, often referred to as *deputy patriarch*, had tremendous power over the daughter-in-law. Nowadays, the power dynamics in the same type of family are completely different. A son may still live with an aging parent out of a sense of obligation, but a daughter-in-law's emotional distance from the in-laws may make her caregiving less satisfactory when compared

with that of a daughter. Aging parents—particularly, those who have little education and depend solely on their children for support—may feel especially vulnerable. Many complain that they are living at the mercy of their children. It is easy to find anecdotal stories documenting the conflicts between parents and coresiding sons and daughters-in-law. In fact, a study of intergenerational relations in rural China documented that the relationship between the mother-in-law and the daughter-in-law was the most frequently mentioned intergenerational dispute and that old-age support was the most frequently mentioned grievance in interviews with older persons (Yang & Chandler, 1992)

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. We are optimistic that this article, through looking closely at the contours of the relationship in China, has confirmed the importance of context to building understandings of the connections between living arrangements and subjective well-being. Chinese patterns are indeed different from U.S. patterns. In addition, through the patterns that emerge for China, we are reminded of the need to take into account in all contexts the intersection between preferences and practices regarding coresidence and preferences regarding care. This issue is likely to be important for the oldest old who may need regular assistance. For example, outsourcing of care, the gendered organization of caregiving within households, and societal supports for care of aging elders may differ across societies and shape the patterns that we observe. These results suggest that explicit consideration of normative context and related social-contextual factors in analyses of the ways in which family and household characteristics support or impede the well-being of oldest old adults will enhance future research efforts.

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**Table 1**  
Residential Arrangements of the Oldest Old in China (in Percentages)

Variable	Urban (n = 2,948)	Rural (n = 4,586)	Total (n = 7,534)
Living with a spouse, no children	13.6	7.5	9.9
Living with children, no spouse	49.4	59.0	55.2
Son	35.3	52.9	46.0
Daughter	14.0	6.0	9.2
Living with spouse and children	8.7	6.6	7.4
Son	6.7	5.8	6.2
Daughter	2.1	0.7	1.3
Living with no spouse, no children	28.3	26.9	27.5
Alone	8.3	11.2	10.1
Nursing home	9.9	1.5	4.8
With others	10.0	14.2	12.6

**Table 2**  
Items Used to Construct the Indices of Positive and Negative Well-Being

Variable	Urban			Rural			Total		
	M	SD	Max	M	SD	Max	M	SD	Max
Index of Positive Well-Being	11.554	1.913	5	10.900	1.866	4	11.156	1.911	4
Quality of life	4.001	0.722	1	3.822	0.717	1	3.891	0.724	1
Looking on the bright side of things	4.048	0.791	1	3.835	0.804	1	3.918	0.806	1
Happy as younger	3.485	1.071	1	3.208	1.044	1	3.316	1.063	1
Index of Negative Well-Being	7.624	2.098	3	7.936	2.007	3	7.814	2.048	3
Feel fearful	2.281	0.846	1	2.390	0.856	1	2.348	0.854	1
Feel lonely	2.391	0.905	1	2.460	0.873	1	2.433	0.886	1
Feel useless	2.963	1.021	1	3.102	0.986	1	3.048	1.002	1

**Table 3**  
Descriptive Statistics on Selected Independent Variables

Variable	Urban ( <i>n</i> = 2,948)		Rural ( <i>n</i> = 4,586)		Total ( <i>n</i> = 7,534)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	89.776	7.491	92.222	7.527	91.265	7.606
Male	0.447	0.497	0.407	0.491	0.422	0.494
Currently married	0.237	0.426	0.153	0.360	0.186	0.389
Spouse dead, ≤2 years	0.353	0.478	0.251	0.434	0.291	0.454
Self-reported health (1–5)	2.677	0.827	2.622	0.799	2.644	0.811
Years of schooling	3.147	4.816	1.195	2.530	1.959	3.725
Whether supports oneself and spouse	0.393	0.489	0.066	0.248	0.194	0.395
Number of children	4.524	2.858	4.911	2.718	4.759	2.780
Whether other children visit frequently	0.687	0.464	0.763	0.425	0.734	0.442
Whether siblings visit frequently	0.160	0.367	0.179	0.383	0.172	0.377



**Table 4**  
Ordinary Least Squares Regression on Positive and Negative Well-Being Among Oldest Old

Variable	Positive Well-Being		Negative Well-Being	
	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)
Lives with spouse or children	0.601 <sup>***</sup> (0.086)	0.572 <sup>***</sup> (0.077)	-0.282 <sup>**</sup> (0.093)	-0.283 <sup>**</sup> (0.091)
Lives with others	0.753 <sup>***</sup> (0.073)	0.644 <sup>***</sup> (0.065)	-0.354 <sup>***</sup> (0.078)	-0.283 <sup>***</sup> (0.077)
Urban (1 = <i>urban</i> , 0 = <i>rural</i> )	0.616 <sup>***</sup> (0.045)	0.424 <sup>***</sup> (0.044)	-0.226 <sup>***</sup> (0.048)	-0.108 <sup>*</sup> (0.052)
Age	-0.006 <sup>*</sup> (0.003)	0.004 (0.003)	0.024 <sup>***</sup> (0.003)	0.017 <sup>***</sup> (0.003)
Male	0.214 <sup>***</sup> (0.045)	-0.062 (0.045)	-0.491 <sup>***</sup> (0.048)	-0.292 <sup>***</sup> (0.053)
Spouse dead, ≤2 years		-0.046 (0.047)		0.037 (0.055)
Self-reported health (1-4)		1.017 <sup>***</sup> (0.024)		-0.570 <sup>***</sup> (0.028)
Years of schooling		0.040 <sup>***</sup> (0.006)		-0.036 <sup>***</sup> (0.007)
Whether supports oneself and spouse		0.336 <sup>***</sup> (0.060)		-0.184 <sup>*</sup> (0.071)
Number of children		-0.002 (0.008)		-0.004 (0.009)
Whether other children visit frequently		0.125 <sup>*</sup> (0.049)		-0.142 <sup>*</sup> (0.058)
Whether siblings visit frequently		0.140 <sup>**</sup> (0.053)		-0.136 <sup>*</sup> (0.062)
Constant	10.748 <sup>***</sup> (0.280)	7.126 <sup>***</sup> (0.280)	6.200 <sup>***</sup> (0.301)	8.481 <sup>***</sup> (0.327)
<i>F</i>	73.18	203.45	54.10	64.69
<i>df</i>	5, 7489	12, 7482	5, 7528	12, 7521
<i>R</i> <sup>2</sup>	.05	.25	.03	.09
<i>n</i>	7,495	7,495	7,534	7,534

Note: Coefficients are unstandardized. Living alone is the reference category for living arrangements.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

**Table 5**

Ordinary Least Squares Regression on Positive and Negative Well-Being Among Oldest Old Living With Spouse or Child

Variable	Positive Well-Being		Negative Well-Being	
	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)
Lives with child, no spouse	-0.009 (0.082)	0.120 (0.098)	0.114 (0.089)	0.135 (0.115)
Lives with spouse and child	0.033 (0.104)	0.132 (0.093)	-0.143 (0.112)	-0.201 (0.110)
Urban (1 = <i>urban</i> , 0 = <i>rural</i> )	0.634*** (0.052)	0.442*** (0.052)	-0.252*** (0.057)	-0.149* (0.061)
Age	-0.006 (0.004)	0.003 (0.003)	0.027*** (0.004)	0.020*** (0.004)
Male	0.225*** (0.056)	-0.036 (0.053)	-0.385*** (0.060)	-0.218*** (0.063)
Spouse dead, ≤2 years		-0.009 (0.077)		0.141 (0.091)
Self-reported health (1-4)		1.015*** (0.028)		-0.538*** (0.033)
Years of schooling		0.039*** (0.007)		-0.032*** (0.008)
Whether supports oneself and spouse		0.329*** (0.070)		-0.175* (0.083)
Number of children		0.007 (0.009)		-0.010 (0.011)
Whether other children visit frequently		0.041 (0.059)		-0.132 (0.070)
Whether siblings visit frequently		0.141* (0.059)		-0.149* (0.070)
Constant	11.446*** (0.330)	7.772*** (0.340)	5.514*** (0.355)	7.621*** (0.400)
<i>F</i>	38.32	141.51	40.55	44.73
<i>df</i>	5, 5437	12, 5430	5, 5459	12, 5452
<i>R</i> <sup>2</sup>	.03	.24	.04	.09
<i>n</i>	5,443	5,443	5,465	5,465

Note: Coefficients are unstandardized. Living with spouse and no child is the reference category for living arrangements.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

**Table 6**  
 Ordinary Least Squares Regression on Positive and Negative Well-Being for Oldest Old Living With a Child

Variable	Positive Well-Being		Negative Well-Being	
	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)
Lives with daughter	0.287*** (0.080)	0.266*** (0.072)	-0.042 (0.086)	-0.063 (0.086)
Urban (1 = <i>urban</i> , 0 = <i>rural</i> )	0.580*** (0.062)	0.439*** (0.059)	-0.164* (0.068)	-0.102 (0.070)
Age	-0.004 (0.004)	0.004 (0.004)	0.025*** (0.004)	0.020*** (0.004)
Male	0.216*** (0.061)	-0.040 (0.061)	-0.358*** (0.066)	-0.211** (0.072)
Spouse dead, ≤ 2 years		-0.014 (0.077)		0.133 (0.092)
Self-reported health (1-4)		1.018*** (0.032)		-0.504*** (0.038)
Years of schooling		0.035*** (0.010)		-0.028* (0.012)
Whether supports oneself and spouse		0.328*** (0.090)		-0.126 (0.107)
Number of children		0.010 (0.010)		-0.009 (0.012)
Whether other children visit frequently		0.012 (0.066)		-0.120 (0.079)
Whether siblings visit frequently		0.199** (0.071)		-0.189* (0.085)
Constant	11.224*** (0.374)	7.738*** (0.367)	5.733*** (0.406)	7.701*** (0.437)
<i>F</i>	34.73	113.64	20.59	26.45
<i>df</i>	4, 4135	11, 4128	4, 4066	11, 4147
<i>R</i> <sup>2</sup>	.03	.23	.02	.07
<i>n</i>	4,140	4,140	4,159	4,159

Note: Coefficients are unstandardized. Lives with daughter is the reference category for living arrangements.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

**Table 7**

Ordinary Least Squares Regression on Positive and Negative Well-Being for Oldest Old, Full Typology of Living Arrangements

Variable	Positive Well-Being	Negative Well-Being
	Coefficient (SE)	Coefficient (SE)
Lives with no spouse, no child, but not alone	0.257 <sup>***</sup> (0.076)	-0.141 (0.089)
Lives with no spouse, with son	0.366 <sup>***</sup> (0.059)	-0.135 (0.069)
Lives with no spouse, with daughter	0.643 <sup>***</sup> (0.082)	-0.181 (0.096)
Lives with spouse, no child	0.300 <sup>**</sup> (0.096)	-0.284 <sup>*</sup> (0.112)
Lives with spouse and son	0.432 <sup>***</sup> (0.106)	-0.457 <sup>***</sup> (0.124)
Lives with spouse and daughter	0.471 <sup>*</sup> (0.188)	-0.624 <sup>**</sup> (0.219)
Urban (1 = urban, 0 = rural)	0.431 <sup>***</sup> (0.045)	-0.123 <sup>*</sup> (0.052)
Age	0.004 (0.003)	0.016 <sup>***</sup> (0.003)
Male	-0.053 (0.045)	-0.278 <sup>***</sup> (0.053)
Spouse dead, ≤2 years	-0.021 (0.061)	0.153 <sup>*</sup> (0.072)
Self-reported health (1-4)	1.018 <sup>***</sup> (0.024)	-0.571 <sup>***</sup> (0.028)
Years of schooling	0.040 <sup>***</sup> (0.006)	-0.036 <sup>***</sup> (0.007)
Whether supports oneself and spouse	0.335 <sup>***</sup> (0.061)	-0.161 <sup>*</sup> (0.071)
Number of children	-0.006 (0.008)	-0.002 (0.009)
Whether other children visit frequently	0.129 <sup>**</sup> (0.050)	-0.132 <sup>*</sup> (0.058)
Whether siblings visit frequently	0.142 <sup>**</sup> (0.053)	-0.134 <sup>*</sup> (0.062)
Constant	7.365 <sup>***</sup> (0.281)	8.419 <sup>***</sup> (0.328)
<i>F</i>	150.39	48.77

Variable	Positive Well-Being	Negative Well-Being
	Coefficient (SE)	Coefficient (SE)
<i>df</i>	16, 7478	16, 7517
<i>R</i> <sup>2</sup>	.24	.09
<i>n</i>	7,495	7,534

Note: Coefficients are unstandardized. Lives with spouse and daughter is the reference category for living arrangements.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .