

Grandchildren as Support and Care Providers to Disabled Older Adults in China

Merril Silverstein^{1*} and Ling Xu²

Abstract: Increased life expectancy in China implies that adults increasingly survive long enough to see their grandchildren reach adulthood and take on elevated importance—even as smaller family size reduces the number of children and grandchildren available. This article examined the prevalence with which older adults received support and care from grandchildren and the family conditions under which the likelihood of this assistance is enhanced. The data for our analysis derived from the 2014 wave of the Chinese Longitudinal Aging Social Survey, limited to 13.4% of respondents (n = 1,551) who reported requiring personal assistance to perform daily activities. Logistic regression revealed that grandparents were more likely to receive assistance from grandchildren when they had no son available or had daughters who did not provide assistance. Results were consistent across urban and rural regions. These findings support the compensatory or substitution role of grandchildren as sources of support and care for their grandparents within a gendered family system. Implications for policies and services serving older people in China are discussed.

Keywords: Population Ageing, Care Provision, Intergenerational Relationships, China

DOI 10.1515/pophzn-2016-0009

Received: 31 June 2016, Accepted: 24 February 2017

Introduction

China has the largest population of older adults aged in the world with 177 million people aged 60 years or older (National Bureau of Statistics of China, 2011), a number that is projected to grow by one-third by 2050 (United Nations, 2015). At the same time, the average family size in China has steadily declined from 5.3 in 1950, to 4.3 in 1978, and 3.0 in 2012 (National Bureau of Statistics of China, 2011). These two interrelated societal processes—population aging and fertility decline—have created serious concerns regarding who will take care of the large number of adults entering old age with fewer children (Ma et al., 2010; Xu, Li, Min, & Chi, 2016; Zhang & Wang, 2010).

In light of these concerns, support resources available to older adults are of great interest to policy makers. We suggest that grandchildren may represent important sources of assistance for older adults to compensate for the scarcity or unavailability of

children. Indeed, in the West, there has been growing interest in support exchanges within family networks that extend beyond adult children (Bengtson, 2001; Hoff, 2007). In this article, we examined the prevalence of support and care received by older adults in China, comparing grandchildren to other filial sources of assistance, and examining the family conditions under which grandparents are more likely to receive assistance from their grandchildren. This study has important policy implications for the development of formal services, particularly if alternative sources of care are not forthcoming from the smaller families of frail older Chinese adults.

Grandchildren as Support and Care Providers

Societal changes in China have challenged traditional expectations about whether adult children and grandchildren will continue to be reliable providers

*Corresponding author: merrils@syr.edu

¹Syracuse University

²University of Texas at Arlington

of support and care to older adults. Underlying these challenges are issues related to the reduced availability of both children and grandchildren, and uncertainty about their willingness to serve as providers. In this section, we focus on the changing supply of grandchildren, their normative and legally mandated filial responsibility toward grandparents, and their place within a patrilineal family system. We organize the following discussion by the main social forces that may drive care from grandchildren. These include (1) demographic change (fertility, longevity, and migration), (2) cultural norms and legislative initiatives, (3) gendered lineage patterns, (4) emotional connectedness, (5) public policy context.

The most pronounced demographic change affecting the supply of both children and grandchildren is the precipitous decline in fertility over the past four decades. This change is exemplified by the proliferation of the *4-2-1 family configuration* consisting of four grandparents, two parents, and one grandchild (Bailey, Ruddy, & Shchukina, 2012; Wang, 2010). This family type reflects the thinning-out of adult children, as well as grandchildren, who may serve as potential support and care providers, a worrisome social trend that is causing concern among policy makers and the public-at-large in China (e.g., Wang, 2010; Zhang & Goza, 2006). On the other hand, relatively few older adults in China are childless or grandchildless (Sun & Wang, 2008), suggesting that, even though they are fewer in number, children and grandchildren are almost universally available to older adults. Further, adult children may recruit grandchildren as supplemental caregivers to relieve the deficit of support personnel in the family.

Other demographic changes in China suggest the possibility that grandparent-grandchild bonds may take on added salience and significance in later life. Increased life expectancy among older adults in China implies that grandparents increasingly survive long enough for their grandchildren to reach adulthood and take on elevated importance in the family system (Smith, 2011). In the United States, Uhlenberg (2005) showed that children born in 2000 were four times more likely to have a surviving grandparent at age 30 compared to grandchildren born 100 years earlier. In China, longevity has increased at a more accelerated rate than in the United States. Whereas the United States experienced a 66% increase in life expectancy over a 100-year period, China achieved that same rate of growth in only 50 years (Centers for Disease Control

and Prevention 2007; World Bank, 2016). Increased longevity suggests that older adults in China will have experienced a rapid expansion in the period of grandparenthood, implying that grandchildren will be older and otherwise better equipped to provide support to surviving grandparents. Although postponement of childbearing may lead to age-gapped generations in families we note that sizable gains in life-expectancy—more than 30 years since 1950 and 6 years since 1990 (World Health Organization, 2015)—have outstripped delays in age at first-birth to produce an overall increase in the number of co-surviving generations in the family.

The cultural norm for Chinese grandparents to engage in coparenting and full-time care for grandchildren, often due to the labor migration of working parents, has resulted in strengthened emotional bonds with grandchildren and, prospectively, increased amounts of support from them (Xu & Chi, 2016; Xu, Silverstein, & Chi, 2014). The large number of grandparents in China who are raising their grandchildren suggests that life-long bonds of reciprocity may induce more care from grandchildren than that seen in Western countries, where custodial grandparenting is far rarer (Baker & Silverstein, 2012).

Grandchildren taking care of grandparents is a culturally sanctioned activity as well as legally required under Chinese law. The precepts of filial piety, which for centuries has guided the obligations of adult children for their older parents, extends to multiple descending generations (Fan, 2006). Indeed, China's Marriage Law, which formally defines the lines of filial duty in the Chinese family, also specifies responsibilities that grandchildren have for their aging grandparents (Hare-Mustin, 1982). Filial piety norms are not gender neutral, however. The preference for male heirs, that characterizes the patrilineal kinship system in China, gives precedence to sons and their families in assigning care and support roles (Cong & Silverstein, 2008; Whyte & Xu, 2003). Thus, traditional gender norms may bring paternal grandchildren into the support system of older adults, while socially distancing maternal grandchildren from them.

Although willingness of grandchildren to provide care is difficult to assess empirically, we note that grandparents tend to be emotionally close to their adult grandchildren, particularly in rural areas (Xu, Silverstein & Chi, 2014). Research by Lou (2010) among older adults in Hong Kong found

that emotional support from adolescent and adult grandchildren was associated with life satisfaction, suggesting the continued importance of this intergenerational tie. How these close relationships evolve into a helping relationship is suggested in research by Xu and Chi (2016) who found that grandparents tended to receive instrumental support from those grandchildren with whom they had the closest emotional relationships (Xu & Chi, 2016).

In the United States, research has also documented that grandparents are emotionally close to their adult grandchildren, even as the strength of these bonds are tempered by the geographic mobility of grandchildren (Harwood & Lin, 2000). Other evidence in the U.S. shows that grandparents and grandchildren tend to strengthen their emotional connection over time, as grandparents grow older, in spite of having less contact with each other as result of increased geographic distance (Silverstein & Long, 1998). In a small sample of older adults in Miami, receiving expressive or emotional support from adult grandchildren was much more common than the receipt of instrumental support from them (Langer, 1990). Similarly, older grandparents in Germany rarely received instrumental support from adult grandchildren, though maintained close emotional connection (Hoff, 2007). Thus, the presence of “grandfilial responsibility” (Brody, 1983) on the part of adult grandchildren is somewhat amorphous in Western societies, where the roles and responsibilities of grandchildren are not clearly as defined as they are in China with regard to instrumental types of assistance.

Distinctive features of Chinese society make much of the Western research on this topic difficult to generalize. Given that community-based services and residential care for older adults are under-developed and not readily available in China, family members remain essential sources of assistance to frail older adults (Xu & Chi, 2011; Xu & Chi, 2016). A large majority of older adults receive needed care from their adult children (Cheng & Chan, 2006; Zimmer & Kwong, 2003) in what has been summarized as the *mutual-aid* model of Chinese kinship support (Sun, 2002). However, social, economic, and cultural changes in contemporary China have ostensibly strained the capacity of adult children to provide care to their aging parents (Guo, 2008). In light of smaller and more mobile families in China, unmet need may be an even greater risk if alternative family

members such as grandchildren do not compensate for this deficit.

Therefore, we argue that support and care from grandchildren may be more pronounced in China than in Western countries, due to strong cultural preferences for family support, greater socioeconomic disadvantage, and scarcity of formal services. For the same reasons, support and care from grandchildren may be more pronounced in the less developed rural parts of China compared to urban China. Thus, adult grandchildren in China may be obligated to follow the cultural scripts incumbent on their parents, particularly those that obligate sons and their families to be responsible for the well-being of older parents.

One aspect of *grandfamilies* that shares common ground across societies is the interdependence of generations. Research demonstrates that emotional closeness between grandparents and grandchildren is associated with emotional closeness between grandparents and the middle-generation, as has been shown in both the United States (Monserud, 2008, 2010) and China (Xu, Silverstein, & Chi, 2014). In a patrilineal kinship system within which relationships with sons are favored over those with daughters, grandchildren tend to be emotionally closer to their paternal grandparents than they are to their maternal grandparents (Xu, Silverstein, & Chi, 2014). Therefore, it is also possible that grandchildren are more likely to provide care for their paternal grandparents than for their maternal grandparents.

In summary, countervailing societal trends discussed above make it unclear as to how grandchildren might be involved in the support and care of older adults in China. We suggest that grandchildren may serve as either able *supplements* or *substitutes* for adult children who are challenged in their ability to provide care—with supplementation implying a shared role with adult children and substitution implying a compensatory role. Given demographic forces reducing availability of children and grandchildren, but legal and cultural mandates for both parties to provide care within the context of a patrilineal family system, we believe that it is a propitious time to document the extent to which, and under what conditions, frail older adults in China rely on grandchildren for needed support and care. In this analysis, we use national representative data to examine this issue.

Research Questions and Expectations

We frame our expectations along several broad sets of research questions corresponding to descriptive and multivariate analyses. First, we ask to what degree grandchildren serve as sources of support and care for older individuals, relative to contributions from sons, daughters, and spouses. Second, we ask whether support and care from grandchildren varies with increasing age and rural-urban residence of grandparents, relative to support and care from other available sources. Studies have shown that the amount of support received by older adults in China is positively associated with age because of increasing need due to physical frailty and multi-morbidity (Xu & Chi, 2016). Research also demonstrates that rural families are more actively engaged in intergenerational exchanges than urban families, and express stronger expectations filial for filial assistance (Lee & Xiao, 1998; Xu & Ji, 1999). We expect that grandparents will be less likely to receive assistance from grandchildren compared to other filial sources, but will be more likely to receive assistance from them at older ages, and in rural than in urban contexts. We base these expectations on the contingent and culturally embedded role that grandchildren likely play within the Chinese family system.

Our third set of research questions addresses the interdependence between grandchildren and other sources of assistance. How does reliance on grandchildren depend on support and care received from sons, daughters, and spouses? Specifically, is assistance from grandchildren compensatory or complementary to other filial sources? We expect that grandchildren will play a compensatory role and be relied upon more for support and care when assistance is not forthcoming from sons, daughters, or when grandparents are widowed (or otherwise unpartnered) or do not receive assistance from a spouse. Referencing the well-known patrilineal tilt in Chinese families (Whyte & Xu, 2003), we note that the absence of sons is associated with increased worry about the lack of an available caregiver, as well as lower psychological well-being among Chinese older adults (Xu, Li, Min, & Chi, 2016). Therefore, we suggest that older adults who experience support deficits by virtue of being in daughter-only families, may benefit most from receiving assistance from grandchildren. We further expect these relationships to be stronger in rural areas than in urban areas.

Method

Sample. The data used for this study derived from the first wave (2014) of the China Longitudinal Aging Social Survey (CLASS), a nationally representative survey of the 60+ population in China directed by National Survey Research Center at Renmin University. The sample was recruited via a multistage stratified random sampling procedure and consisted of 11,511 older adults residing in 462 communities within 28 provinces in China. Given our interest in support and care received by those in need, we limited our analytic sample to the 13.4% of respondents ($n = 1,551$) who reported requiring at least some assistance in performing either instrumental activities of daily living (household chores) or personal activities of daily living (eating, bathing, and dressing). We selected the sample based on the need for assistance for both theoretical and pragmatic reasons. Our interest is in helping behavior motivated by frailty rather than purely by expediency or the desire to demonstrate filial piety. In addition, only respondents who had need of instrumental support and/or personal care were asked questions about sources of assistance.

Because the survey does not ask about the availability of grandchildren, we further restricted the sample to the 97.2% who had at least one ever-married child under the assumption that the likelihood of having at least one grandchild would be optimized through a married child (unfortunately, the survey did not ask about the presence or number of grandchildren). After we trimmed ten cases for having missing data on key predictors, the sample for the final multivariate model totaled 1,509.

Measures. After respondents acknowledged their need for assistance with either instrumental or personal activities, follow-up questions ascertained the three most important sources of care based on relational category. The most commonly endorsed categories in order of prevalence were spouses, sons, daughters-in-law, daughters, grandchildren, and sons-in-law. In the interest of parsimony and in keeping with previous research, assistance was deemed received if it served either or both types of needs (see Xu & Chi, 2010; Xu, Li, Min, & Chi, 2016). Sons-in-laws, daughters-in-law, and grandchildren-in-law were considered as extensions of their partners, such that assistance was considered from the following filial units: sons and/or daughters-in-law; daughters and/or sons-in-law; and grandchildren and/or their spouses (for brevity, we use only the name of lineal kin in our labels and

discussion). We note that 96.3% of all support sources mentioned by respondents consisted of the ones we considered, demonstrating that assistance from those outside this most intimate family circle was quite rare.

In our multivariate analysis, the dependent variable was receipt of assistance from grandchildren. If a grandchild or grandchild-in-law was mentioned either as a support provider for instrumental needs or as a care provider for personal care needs, that variable was coded as “1” for having received support and/or care from grandchildren, and as “0” for not having received support or care from grandchildren.

As our interest is in predicting assistance from grandchildren based on whether other family members were present and providing assistance, for each of the other sources of assistance (sons, daughters, and spouses) we created two dichotomous variables: no such source available (=1) and did not receive assistance from the source (=1), with the reference group consisting of those who received assistance from the source. We also controlled for the following socio-demographic characteristics of respondents: gender coded as female (=1) vs. male (=0); age in years; education as represented by two dichotomous variables for no formal education (=1) and less than high school (=1), with high school and higher serving as the reference group; health as a dichotomous variable of very unhealthy/somewhat unhealthy/fair health (=1) vs. healthy/very healthy (=0). Marital status was incorporated into the spouse support variable with two dichotomous variables: no spouse (=1) and non-supportive spouse (=1), with the reference group consisting of those with a supportive spouse. Number of sons and number of daughters were considered as continuous variables. We note that these two variables indirectly accounted for number of grandchildren, for which there was no direct measure. Rural residency (=1) was contrasted with urban residency (=0) based on location of interview rather than household registration status (i.e., *hukou*). Given the age of the sample, there were few individuals for whom location of the interview and household registration were different.

Analytic approach. Our first analytic goal was to examine the prevalence of assistance received from grandchildren in relation to assistance received from sons, daughters, and spouses, so as to depict the composition of the functional filial-care network in urban and rural contexts. Then we examined age differences in the responsiveness of each *available* source of assistance for urban and rural residents.

Finally, we estimated a multivariate logistic regression equation to examine whether support and care from grandchildren was associated with whether sons, daughters, and spouses were available, and whether they provided assistance given their availability. In this analysis, we focused on the interplay of grandchildren with other family actors—to answer the question of whether grandchildren substituted for the absence or non-responsiveness of other filial care providers, or whether they enhanced the care efforts of others.

Results

Descriptive characteristics of the analytic sample are found in Table 1. Somewhat more than half the sample is female (57%), married (56%), in less than good health (58%), and urban (53%). Education level is relatively low with slightly less than half the sample (48%) being illiterate with no formal schooling. Due to the sample selection criterion, the analytic sample is older than the full sample, with 41% aged 80 years or older.

In terms of family structure, only 10% had no sons and two-thirds (67%) had either one or two sons; 14% had no daughters, and 59% had either one or two daughters. The prevalence of each source of support and care (unadjusted for availability) reveal that 58% of the sample received assistance from sons, 35% from daughters, 39% from spouses, and 16% from grandchildren.

Next, we compared the prevalence of four sources of assistance between rural and urban residents. Comparisons were limited to respondents for whom the relevant source exists in order to account for differences in availability. We note again that the existence of grandchildren was not ascertained in the survey, which is why we limited the analytic sample to respondents with at least one married child.

Table 2 shows rural-urban comparisons in prevalence of assistance for each source with corresponding chi square tests. Results revealed similar overall patterns between urban and rural residents in that the spouse was the primary provider of assistance, followed by son(s), daughter(s), and grandchildren. However, we found that compared to urban residents, rural residents were significantly more likely to receive support and care from sons (68% vs. 60%) and grandchildren (19% vs. 14%), and significantly less likely to receive assistance from daughters (33% vs. 48%). No difference was found

Table 1. Distribution of analytic variables for sub-sample of respondents who required instrumental or personal assistance and who have at least one married child (N = 1,509).

Variable	N	Percent
Gender		
Male	648	42.9
Female	861	57.1
Education		
No education	717	47.5
Less than high school	643	42.6
High school and higher	149	9.9
Age		
60-69	371	24.6
70-79	519	34.4
80+	619	41.0
Marital status		
Not currently married	662	43.9
Currently married	847	56.1
Self-rated health		
Very/somewhat healthy	637	42.2
Fair or somewhat/very unhealthy	872	57.8
Urban-rural residency		
Urban	793	52.6
Rural	716	47.4
Number of sons		
0	143	9.5
1	503	33.4
2	514	34.0
3+	349	23.1
Number of daughters		
0	211	14.0
1	504	33.4
2	388	25.7
3+	406	26.9
Support from son(s)		
No support received	639	42.4
Support received	869	57.6
Support from daughter(s)		
No support received	986	65.3
Support received	523	34.7
Support from spouse		
No support received	921	61.0
Support received	588	39.0
Support from grandchild(ren)		
No support received	1,263	83.7
Support received	246	16.3

with respect to support and care from spouses (70% vs. 69%).

Given that the provision of assistance is an age-related process, we examined the sensitivity of each source of support and care by age of respondents as a proxy for vulnerability. We show the prevalence of filial sources of assistance by age-group for urban residents in Figure 1 and rural residents in Figure 2. Figure 1 shows that the most dramatic age-related change in the urban sample occurred with respect to increasing prevalence in assistance from sons, with only a modest increase in assistance from daughters, but only among the oldest parents. Receipt of assistance from grandchildren also increased with age but at a slower rate than assistance from sons and daughters. Assistance from spouses declined with age and became even less prevalent than support from sons in the 80+ group, a possible

consequence of frailty among marital partners in this oldest age group.

Age patterns in the rural sample, shown in Figure 2, revealed a steeper rate of increase in assistance from sons and a lower rate of increase in assistance from daughters than comparable patterns found in the urban sample, reflecting a more traditional gender-based division of labor in rural families that becomes more distinct at older ages. There was also a sharper decline in assistance from spouses in the rural context, a likely consequence of poorer health among older adults in rural China. Finally, receipt of assistance from grandchildren increased more rapidly with age among rural residents than among urban residents, proportionately doubling and rising almost to the level of daughters in the oldest age group.

We next examine whether assistance from grandchildren was contingent on the availability and

Table 2. Rural-urban comparison of sources of support and care conditioned on availability of source of support and care.

Source of Support and Care	Rural			Urban			Chi-square (df)
	No	Yes	% Yes	No	Yes	% Yes	
Son(s)	206	445	68.4	291	430	59.6	11.25** (1)
Daughter(s)	423	204	32.5	355	322	47.6	30.54*** (1)
Spouse	111	259	70.0	153	341	69.0	.09 (1)
Grandchild(ren)	578	139	19.4	685	108	13.6	9.15** (1)

*p. <.05; **p. <.01; ***p. <.001

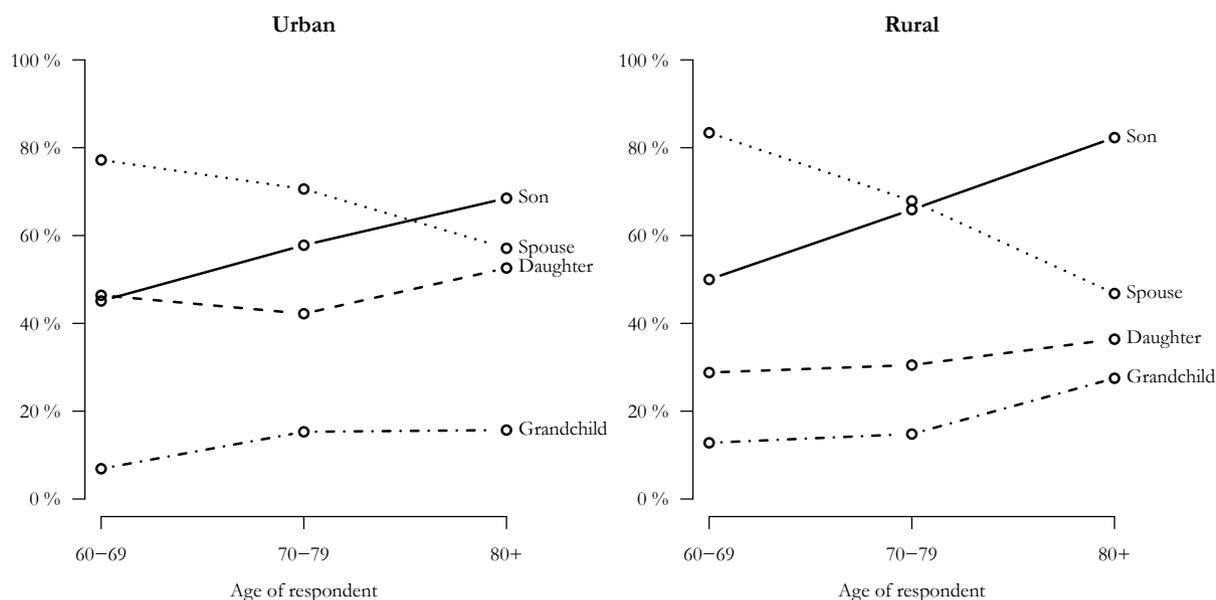


Figure 1: Percent receiving support and care by source and age for urban sample on the left and rural sample on the right (conditioned on availability)

responsiveness of sons, daughters, and spouses. We estimated logistic regression equations predicting receipt of assistance from grandchildren in the full analytic sample, and separately in urban and rural sub-samples. Coefficients from these regressions, shown in Table 3, reveal that respondents with no sons were more than twice as likely to receive assistance from grandchildren compared to respondents receiving assistance from sons ($OR = 2.2$). The size of this effect was approximately the same in urban and rural regions. We observed no effect for those who had sons but did not receive assistance from them. In the urban sub-sample, the number of sons was positively associated with the likelihood of receiving assistance from grandchildren, each additional son increasing the odds by 33%.

Turning to daughters, we found that respondents with non-supportive daughters were almost twice as likely as those with supportive daughters ($OR = 1.97$) to receive assistance from grandchildren. This result was similar in both urban and rural sub-samples. Neither the absence of a daughter, nor the number of daughters, elevated the likelihood that assistance was received from grandchildren.

The largest effects in the equations were found with respect to spouse availability and spousal

support. Respondents with no spouse were more than five-times more likely ($OR = 5.5$) to receive assistance from grandchildren compared to those with a supportive spouse, while respondents whose spouse provided no assistance were more than three times more likely ($OR = 3.4$) to receive assistance from grandchildren. Both effects were comparable in urban and rural sub-samples.

Other variables predicted assistance from grandchildren as expected, with higher education reducing assistance from grandchildren (predominantly in the urban sub-sample) and poorer health increasing assistance from grandchildren (predominantly in the rural sub-sample). Neither age nor gender of respondents was significant.

Discussion

In this article, we examined the prevalence with which older adults received support and care from grandchildren in China and the family conditions under which the likelihood of this assistance is enhanced. Using data from a nationally representative survey of the older population in China and focusing on those whose disability required personal

Table 3. Estimates from logistic regression predicting receipt of support and care from grandchildren among respondents who required assistance (odds ratios in parentheses).

Predictors	Full Sample (N = 1,509)	Urban Sample (N = 793)	Rural Sample (N = 716)
Age	.006 (1.01)	.008 (1.01)	.011 (.011)
Female ¹	.097 (1.10)	-.038 (0.96)	.271 (1.31)
Less than high school ²	-.405* (0.67)	-.522* (0.59)	-.258 (0.77)
High school or more ²	-.827* (0.44)	-.794* (0.45)	-.735 (0.48)
Poorer health ³	.347* (1.42)	.086 (1.09)	.578** (1.78)
Rural residency ⁴	.130 (1.14)	---	---
Number of sons	.116* (1.12)	.288** (1.33)	-.028 (0.97)
No son ⁵	.772** (2.17)	.795* (2.21)	.816* (2.26)
No supportive son(s) ⁵	-.011 (0.99)	.105 (1.11)	-.068 (0.94)
Number of daughters	-.012 (0.99)	.112 (1.12)	-.099 (0.91)
No daughter ⁶	.418 (1.52)	.471 (1.60)	.505 (1.66)
No supportive daughter(s) ⁶	.676*** (1.97)	.675** (1.97)	.717** (2.05)
No spouse ⁷	1.695*** (5.45)	1.557*** (4.74)	1.816*** (6.15)
No supportive spouse ⁷	1.233*** (3.43)	1.323*** (3.76)	1.124** (3.08)
Pseudo r ²	.170	.166	.190

¹Ref = male

²Ref = no schooling/illiterate

³Ref = good or better health

⁴Ref = urban

⁵Ref = at least one supportive son

⁶Ref = at least on supportive daughter

⁷Ref = supportive spouse

assistance, we found that, overall, grandchildren play a relatively minor role compared to sons, daughters, and spouses, but take on elevated importance in rural areas, particularly among the oldest grandparents. Although urban-rural differences are mostly explained by differences in education between the two regions, these descriptive findings nevertheless support a cultural explanation whereby rural residents are more familistic and therefore more inclusive of the wider family network.

Although not entirely straightforward to interpret, the results are consistent with a gendered explanation for the heightened involvement of grandchildren as support and care providers to their grandparents. When there are no sons or daughters-in-law in the family, grandchildren—by definition being on the maternal line—become more important as providers to their grandparents. These grandchildren may shore up a support system weakened by the absence of a male descendant and his spouse—the traditional caregivers in Chinese families. Daughter-only families have become increasingly common in China because of the one-child policy, portending a greater role for grandchildren.

In addition, we found that the absence of support and care from daughters stimulates support and care from grandchildren. Families with non-supportive daughters conform to the traditional allocation of filial roles that minimize eldercare responsibility of daughters, possibly drawing-in grandchildren as alternative providers. It is plausible that grandchildren become surrogate providers for daughters whose filial obligations shift to their husband's family after marriage.

Grandparents rely on grandchildren more often when assistance from a spouse is not forthcoming due to widowhood or frailty. Since both the prevalence and intensity of assistance received are greatest from spouses, the role of grandchildren may be most significant under these conditions of social vulnerability.

Surprisingly, the compensatory involvement of grandchildren was found among both urban and rural residents, although findings were slightly stronger among rural residents. The lack of a strong urban-rural difference in these effects suggest that grandchildren respond similarly to family conditions regardless of regional differences that are typically associated with cultural traditionalism. However, the response of grandchildren to the least healthy grandparents was stronger in rural than in urban China, suggesting

a direct cultural influence of rural residency for the most vulnerable elders.

Having more sons increased the opportunity of urban residents to receive assistance from grandchildren, presumably by increasing the number of paternal grandchildren available. This result suggests that paternal grandchildren are charged with taking responsibility for the care of their grandparents as extensions of their fathers. Supporting this interpretation is that no similar effect was found for number of daughters. That these results held only in urban areas—where number of sons has diminished most dramatically—suggests a possible diminution in assistance from grandchildren within these smaller urban families.

Several limitations of this research deserve mentioning. First, it was not possible to identify from which child supportive grandchildren derived. The inability to distinguish between grandchildren in maternal and paternal lineages limited our interpretation of the results. The best we could accomplish is to consider grandparents with no sons and grandparents with no daughters, in which case grandchildren necessarily derived from only one side of the family, a useful but blunt instrument for considering gendered lines of descent. Second, the survey captured only the top three providers of support, leaving open the possibility that a wider array of family network members may be involved in care. Third, we did not consider the intensity of support and care in this analysis. However, we note that follow-up questions in the survey about frequency of support and care offered evidence that roughly equal proportions of sons (81%), daughters (76%), and grandchildren (78%) provided assistance at least weekly. However, spouses were more likely (98%) than children to provide support and care on weekly or more frequent basis, rendering their loss most consequential.

In spite of the above limitation, the findings of this study have implications for intergenerational family support and care for older Chinese adults. First, our results suggest that older adults in China, particularly those in rural areas, seek support from family members beyond adult children. This suggests the adaptive potential of the family in which grandchildren substitute for culturally appropriate caregivers (i.e. son and spouse) as well as for daughters and spouses who do not provide care. Rather than supplement the efforts of other family members we find evidence that grandchildren serve as substitutes.

We recommend that practitioners in welfare institutions and nonprofit organizations in China that serve the older population appreciate the full range of resources from which family support can be drawn when assessing informal resources for frail older individuals. For example, practitioners could encourage and advocate for younger generations, such as grandchildren, to be involved in care for older people.

Second, sole reliance on family members for support in old age may place an excessive burden on care providers, and sacrifice the well-being of adult children and grandchildren in smaller families. Targeting services toward older adults with fewer personal resources, such as those with poor physical functioning and fewer family members, will better meet the needs of vulnerable older individuals and their care providers.

Third, it is important to consider macro-level sociocultural and policy factors that can respond to care expectations among various family actors. The overwhelming importance of having sons as a strategy to insure old age security suggests that policy makers consider providing incentives for intergenerational caregiving among daughters and the children of daughters. Alternatively, the funding of institutional and community-based eldercare might prioritize older adults with few or no sons.

Other policy initiatives have direct and indirect implications for the way in which care for older adults is organized in China. For instance, policy makers expect the two-child policy, instituted in 2016, to create an uptick in the number of children, and eventually an increase in the number of grandchildren, in multigenerational families. Will this policy also lead to an increase in the number of care providers available to older people? Future policy development in China, such as the expansion of universal pensions and development of readily available of public services, will likely alter the family landscape of care for older persons. How adult children and grandchildren will fit within the portfolio of care that includes formal services is uncertain in a country where filial piety retains its normative strength.

In conclusion, our findings support a compensatory or substitution role of grandchildren as sources of assistance to their grandparents in China. We found that grandchildren take on elevated importance for elders in families without sons. To the degree that

daughter-only families have become more common in China—and gender roles are increasingly blurred—the involvement of grandchildren as care providers for their grandparents may be expected to become more common and, at least partially, counteract the deficit in family supply caused by fertility declines over the past few decades. It is unclear how the strong effects we observed for spousal support should be interpreted in light of longevity gains and changes in healthy life expectancy in China. If duration spent in widowhood and/or frailty increases, our findings suggest that grandchildren may become increasingly important providers of assistance to grandparents.

In summary, our main results show that functionally impaired older adults in China secondarily turn to their grandchildren for assistance, but do so more when they have poorer health and have no son or spouse available; further these findings are moderately stronger in rural than in urban areas. In contrast, most of the Western literature on this topic shows that grandparents are more likely to receive emotional support than instrumental assistance from their grandchildren (e.g., Harwood & Lin, 2000). In China, cultural values that reinforce the primacy of filial duty, including its extension to grandchildren, as well as the scarcity of public services, suggest that grandparents almost exclusively remain reliant on lineal kin for needed support and care.

China represents an interesting country in which to examine the importance of grandchildren as providers of support and care to their grandparents. Chinese society retains elements of its traditional past while in the throes of demographic and social change—with profound implications for filial arrangements for its older population. Several of these changes, such as fertility decline, economic development, and migration, are casting doubt about the viability of the family system to support older adults in need. By widening the lens to include grandchildren, we hope this analysis has added to the nascent discussion concerning adaptive forms of family care for frail elders in China.

Acknowledgments: The authors would like to thank Du Peng, Wang Weidong, and Zhang Wenjuan for their generous support, as well as the National Survey Research Center at Renmin University of China for providing the data used in this research.

References

- Bailey, D., Ruddy, M., & Shchukina, M. (2012). Ageing China: Changes and challenges. <http://www.bbc.com/news/world-asia-19630110>
- Baker, L. A., & Silverstein, M. (2012). The well-being of grandparents caring for grandchildren in rural China and the United States. In S. Arber & V. Timonen (Eds.), *Contemporary grandparenting: Changing family relationships in a global context*. Bristol, England: Policy Press.
- Bengtson, V. L. (2001). Beyond the nuclear family: The increasing importance of multigenerational bonds. *Journal of Marriage and Family*, 63(1), 1-16.
- Brody, E. M., Johnsen, P. T., Fulcomer, M. C., & Lang, A. M. (1983). Women's changing roles and help to elderly parents: Attitudes of three generations of women. *Journal of Gerontology*, 38(5), 597-607.
- Centers for Disease Control and Prevention, National Vital Statistics Reports, Vol. 54, No. 14, April 19, 2006.
- Cheng, S., & Chan, A. C. M. (2006). Filial piety and psychological well-being in well older Chinese. *Journals of Gerontology*, 61B(5), 262.
- Cong, Z., & Silverstein, M. (2008). Intergenerational support and depression among elders in rural China: Do in-laws matter? *Journal of Marriage and Family*, 70, 599-612.
- Fan, R. (2006, March). Confucian filial piety and long term care for aged parents. In *HEC Forum* (Vol. 18, No. 1, pp. 1-17). Kluwer Academic Publishers.
- Guo, Z. G. (2008). Study on changes of China family households in recent years [In Chinese]. *Chinese Journal of Population Science*, 3, 2-10.
- Harwood, J., & Lin, M.-C. (2000). Affiliation, pride, exchange, and distance in grandparents' accounts of relationship with their college-aged grandchildren. *Journal of Communication*, 50 (3), 31-47.
- Hare-Mustin, R. T. (1982). China's Marriage Law: a model for family responsibilities and relationships. *Family Process*, 21(4), 477-481.
- Hoff, A. (2007). Patterns of intergenerational support in grandparent-grandchild and parent-child relationships in Germany. *Ageing & Society*, 27, 643-665.
- Lee, Y. & Xiao, Z. (1998). Children's support for elderly parents in urban and rural China: Results from a national survey. *Journal of Cross-Cultural Gerontology*, 13 (1), 39-62. doi:10.1023/A:1006591608724
- Lou V. W. Q. (2010). Life satisfaction of older adults in Hong Kong: The role of social support from grandchildren. *Social Indicators Research*, 95, 377-391.
- Ma, Y., Qin, X., Chen, R., Li, F., Zhang, K., Ren, Y., & Hu, Z. (2010). Relationship between depression and social support among elders in urban and rural communities [In Chinese]. *Chinese Journal of Gerontology*, 30, 519-521.
- National Bureau of Statistics of China (2011). *Communiqué on the sixth census of China in 2010* [In Chinese]. Beijing, China: Census Bureau. Retrieved from http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/201104/t20110428_30327.html
- Silverstein, M., & Long, J. D. (1998). Trajectories of grandparents' perceived solidarity with adult grandchildren: A growth curve analysis over 23 years. *Journal of Marriage and the Family*, 912-923.
- Smith, T. L. (2011). Adult grandchildren providing care to frail elderly grandparents (Unpublished doctoral dissertation). University at Albany, State University of New York.
- Sun, R. (2002). Old age support in contemporary urban China from both parents' and children's perspectives. *Research on Aging*, 24(3), 337-359.
- Sun, J., & Wang, Q. (2008). Chinese older adults with no children: present and future [In Chinese]. *Population Research*, 32 (2), 73-80.
- Uhlenberg, P. R. (2005). Historical forces shaping grandparent-grandchild relationships: Demography and beyond. In M. Silverstein (Ed). *Intergenerational relations across time and place* (pp. 77-97). New York: Springer.
- United Nations (2015). *World population prospects: The 2015 revision: Key findings and advance tables* (Working Paper No. ESA/P/WP.241). New York, NY: Author.
- Wang, F. (2010). China's Population Destiny: The Looming Crisis. Brookings. Ed. Brookings Institution. Brookings Institution. <http://www.brookings.edu/research/articles/2010/09/china-population-wang>
- Whyte, M. K., & Xu, Q. (2003). Support for aging parents from daughters versus sons. In M. K. Whyte (Ed.), *China's revolutions and intergenerational relations* (pp. 167-195). Ann Arbor, MI: University of Michigan Press.
- World Health Organization (2015). China country assessment report on ageing and health. http://apps.who.int/iris/bitstream/10665/194271/1/9789241509312_eng.pdf. Accessed 02/13/2017.
- Xu, L., & Chi, I. (2010). Intergenerational support and self-rated health among Chinese older adults in one-child families: Urban and rural differences. *Social Development Issue*, 32 (1), 48-61.
- Xu, L., Li, Y., Min, J., & Chi, I. (2016). Worry about not having a caregiver and depressive symptoms: the roles of family support among widowed older adults in Chia: the role of social support. *Ageing and Mental Health*. doi: 10.1080/13607863.2016.1181708
- Xu, L., Silverstein, M., & Chi, I. (2014). Grandparent-grandchild relationships in rural China: the roles of the middle generation and the kinship status of the grandparent. *Journal of Intergenerational Relationships*, 12, 1-15. doi: 10.1080/15350770.2014.929936
- Xu, X. H., & Ji, J. J. (1999). Supports for the aged in China: A rural-urban comparison. *Journal of Asian and African Studies*, 34, 257- 278.
- Zhang, Q., & Wang, L. (2010). Factors influencing psychological well-being in urban empty-nested elders [In Chinese]. *Chinese Journal of Gerontology*, 30, 2334-2336.
- Zhang, Y., & Goza, F. W. (2006). Who will care for the elderly in China? A review of the problems caused by China's one-child policy and their potential solutions. *Journal of Aging Studies*, 20(2) 151-164, doi:10.1016/j.jaging.2005.07.002.
- Zimmer, Z., & Kwong, J. (2003). Family size and support of older adults in urban and rural China. *Demography*, 40(1), 23-44.