Sons and Daughters:Adult Children's Care for Elderly Parents at the End of Life in Rural China

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Abstract

This paper examined correlates of end-of-life care provided by adult children to their elderly parents and investigated the role of gender of adult children in rural China. Data came from "Well-being of Elderly in Anhui Province" longitudinal study. Four waves mortality data were analyzed using multi-level linear model. Findings demonstrate that birth order of children, living arrangement and geographical proximity, and intergenerational exchange were significantly associated with end-of-life care. Primary caregivers at the end of life were sons. The care is mostly provided by the only child,followed by the eldest one. The youngest sons provided the least care among all the sons. Children cohabitating with elderly parents before death provided most of the care, followed by children living in the same village. Physical distance between children and parents decreased the level of care. Children with frequent intergenerational exchanges with elderly parents before deaths, especially sons, tended to provide most end-of-life care.

Keywords: elderly, end-of-life care, intergenerational support, rural China

In traditional Chinese culture featured with filial piety, fundamental responsibilities of children are to provide old age support and end-of-life care. In “Mencius · Tengwen Gong,” providing care for aging parents at the end-of-life is regarded as of greater importance than that of ensuring parental well-being when parents are healthy and alive (Yang, 2008). Home is the most common and preferred place for older adults to pass away in rural China (Gu, Liu, Vlosky, & Yi, 2007). Although the length of bed-ridden time varies, the average number of days for total dependency of oldest old prior to death was shown to be 92 in China (Zhan, 2004). Due to the underdevelopment of social welfare system in both rural and urban areas, end-of-life care were primarily provided by children and/or grandchildren to older adults in China (Zhan, 2004).

Lack of end-of-life care is a top concern for older adults in rural China. Majority of older adults are able to manage self-care needs and provide help to their children before their health deteriorate. In later life, the worst nightmare for elderly parents is lack of companionship and care from children when they are terminally ill and dying. Prior to death, most of older adults experience severe pain, immobility, and psychological distress (Shi & Wang, 2010). End-stage caregiving to elderly parents is not only considered as the last chance to practice filial piety, but also provides children with sense of fulfillment and preparedness for anticipated loss. However, due to the fact that many youths in labor force migrate out of rural areas to pursue better job opportunities, the physical distance between children and aging parents increase dramatically. Accompanying the increased distance, the needs for career development and their own families also impede some adult children from providing end-of-life to aging parents. Providing care to a terminally ill parent is physically and psychologically challenging for adult children caregivers (Reinhard, Kassner, & Houser, 2011). Adult children caregivers were shown to be more likely to experience adverse health outcomes compared to non-caregiver children (McNamara &

Rosenwax, 2010). In some extreme cases, elder abuse and neglect occurs when adult children refuse to shoulder caregiving responsibilities for their terminally ill parents.

This paper aims to answer two research questions listed as follows. What are the levels of care the adult children provided for elderly parents at the end of life in contemporary rural China? How do these levels of care influenced by characteristics of families and that of individual children? As an important final stage in the life course, end-of-life care is a neglected area of research and warrants further exploration. In western countries, hospice is the formal institution for end-of-life care. However, in the Chinese cultural context, individuals expect to die in their own home (Gu, Liu, Vlosky, & Yi, 2007). In addition to lack of hospice care and sensitivity of end-of-life issues in China, there is limited research on end-stage life experience and well-being among older adults. Existing studies in this area mainly focus on health conditions of older adults and end-stage caregiving time and needs (Bo, 2000; Gu, 2004; Gu, Liu, & Zhang, 2007; Zhan, 2004). Few studies have been conducted to explore factors of end-of-life care provided by adult children to elderly parents using quantitative data.

This paper examined correlates of end-of-life care provided by adult children to their elderly parents and further investigated the role of gender of adult children in the context of mass out-migration of adult children in rural China. By utilizing longitudinal data on mortality over a decade, this paper took advantage of well-documented intergenerational interactions between adult children and elderly parents prior to deaths from a life course perspective and sought to better contribute to the knowledge building process in the area of adult children caregiving to older adults at the end of life in rural China.

Conceptual Framework

Birth order of children. Birth order of children could be an important factor related to end-of-life care to elderly parents. In Confucianism, *xiaoti* is an important concept. *Xiao* refers to the relationship between children and parents whereas *ti* refers to the relationship between siblings. In other words, children are expected to take care of parents when they get older. Older siblings should be expected by younger siblings. Based on the birth order, each child in the family have different rights and shoulder different responsibilities. The eldest son and the eldest daughter play a leading and exemplary role among other siblings when it comes to practice filial piety and ensure parental well-being. The eldest son and the eldest daughter is assumed to provide most of old age support for their parents by the filial norm. This situation exists in many Asian countries such as Japan, South Korea, and so on (Chen, 2003). The findings of existing research on how birth orders of children influence the practice of filial piety are inconsistent. The eldest sons were shown to be more responsible in taking care of parents (Hansson, Chernovetz, Jones, & Stortz, 1978). The eldest sonss and the eldest daughter were more likely to cohabitate with parents (Cong & Silverstein, 2010). Middle children were less likely to provide parental support than that of the eldest or the youngest siblings (Salmon,2003). On the contratry, Lopata found that among all the daughters, the youngest daughters tended to be more emotionally close to parents, whereas among all the sons, the eldest sons tended to have the worse emotional relationship with parents. However, children who were the closest with parents emotionally were not necessarily the ones provided parents with the most tangible support (Lopata,1973). Birth order of children was shown to be not related with practice of filial piety in some studies (Houser, Berkman, & Bardsley,1985; Spitze & Logan,1991).

Physical distance between children and parents. Migration and relocation often plays a negative role in later life. Physical distance between children and elderly parents makes harder

for children to provide support in time. Daughters who lived far away were less likely to provide care for their elderly parents and also less likely to be expected to share the caregiving responsibilities by other siblings(Karasik & Conway-Turner,1995). Living arrangements reflect the needs for caregiving among older adults in certain extent as evidenced by the fact that children caregivers tended to live with their parents when in need(Logan, Bian & Bian, 1998). Coresidence with elderly parents is considered as one major contribution in providing care for elderly parents. Parents were more likely to receive care from cohabitating children, followed by children living nearby, and then children living further away (Song&Li,2008). However, the results from the aforementioned studies might not be applicable to end-of-life care for elderly parents.

Intergenerational support exchange. As a delayed intergenerational support exchange process, the level of support exchange between elderly parents and children before the parents get sick could influence the level of end-of-life care the elderly parents received from their children. Intergenerational support exchange including financial, instrumental, and emotional is a life-time long exchange process (Zuo,Li&Wu,2011). In rural areas, due to the lack of social services for old age support, family members rely on each other in times of need(Agree, Biddlecom, & Valente, 2005; Hermalin, 2002; Yang, 1996). In the delayed intergenerational resources exchange, that is, parents' early investment in their children when their children are young would result in reciprocal exchange when they get older. Silverstein considers support from children as repay to parents' early investment and provide parents with old age security(Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). In the reciprocity relations between children and parents, will children repay the debt by providing end-of-life care to elderly parents? On the other hand, will parents receive end-of-life that are sufficient for what

parents do for their children before the end of life? Overall, research on intergenerational support focused on the reason for support exchange between adult children and elderly parents. However, there is a lack of research on contributing factors of children-parents relations at the end stage of life.

Gender perspective of adult children caregivers. There could be some gender differences among adult children caregivers of older adults. Based on labor division and nature of caregiving, women tend to shoulder more caregiving responsibilities compared to men (Walker, 1982). However, in rural China, the percentage of sons and daughters-in-law as primary caregivers of older adults is much more than that of daughters and sons-in-law as expected by following the norms that sons are old age support for aging parents. In addition to the "old age support" norm, daughters-in-law often become primary caregivers according to traditional labor divisions in families, that is, males are breadwinners and females are housewives. Daughters play a less role in caring for their elderly parents compared to daughters-in-law (Wang,Xiong&Yu,2006). Grandchildren on the side of sons also take part in the caring for their aging paternal grandparents in rural areas in China. The impact of gender differences in reciprocal relations between children and parents might decrease as parents reach advanced ages (e.g., Cherlin & Furstenberg, 1986). Gender differences in adult children caregivers of elderly parents are decreasing accompanying the economic and social transformations, especially labor force migration .

Methods

Sample

Data came from the 2001, 2003, 2006, 2009, and 2012 waves of a longitudinal study entitled "The Well-being of Older People in Anhui Province", collected jointly by the Schools of Gerontology and Social Work at the University of Southern California and the Population Research Institute of Xi'an

Jiaotong University, China. Older adults who aged 60 and older resided in the rural region of Chaohu, Anhui Province, China were randomly selected using stratified multi-stage sampling method. At the baseline (2001 wave), there were 1,715 valid questionnaires with a satisfactory response rate of 95.3%. At subsequent waves, the number of valid questionnaires was 1,391 (wave 2003), 1,067 (wave 2006), 808 (wave 2009), and 605 (wave 2012). Since wave 2003, mortality questionnaires were used to target deceased older adults. In-door interviews using both the main questionnaire and the mortality questionnaire were conducted at each wave since 2003. The main questionnaire was consisted of socio-demographics of elderly parents and their children, intergenerational exchange, health status of older adults, and so on. The mortality questionnaire included death-related information, end-of-life individual and family characteristics, caregiving providers and frequencies and so on. This study used data from older adults who had at least one child before their deaths since the focus of this study is from the perspective of children from deceased aging parents. Working sample is composed of 1,557 son-parent dyads, corresponding to 708 older adult families and 1,355 daughter-parent dyads, corresponding to 660 older adults families.

Measures

Dependent variable. The frequency of provided household chore help and personal care by adult children at the end of life of elderly parents was used as the dependent variable in this study. Household chore help included cleaning up, laundry, dish washing, etc. Personal care included bathing, putting on clothes, etc. Frequency of two types care provided to older adults was obtained from each child and their spouse. Based on the 4-point response set regarding the frequency of care in the questionnaire, values were given as follows: 1 = *everyday (equivalent to 7.5)*, 2 = *at least once in a week (equivalent to 1.5)*, 3 = *a couple of times every month (equivalent to 0.5)*, 4 = *rarely (equivalent to 0)*. Scores from each child (including the spouse of the child) were summated. Higher scores suggest a higher level of care provided by adult children to their elderly parents before deaths.

Independent variables. Birth order of children included four categories such as *only son or only daughter*, *eldest son or eldest daughter*, *youngest*, and *middle children* with *yes* or *no* as the response set. Physical distance from children to parents was consisted of *living with aging parents*, *same village*, *same county*, *same city*, and *same province or outside* with *yes* or *no* as the response set. The information on physical distance obtained before the deaths of elderly parents was used in the analysis.

Intergenerational support exchange before the deaths of elderly parents was composed of financial support, instrumental support, and emotional support. The information was extracted from the previous wave of data when elderly parents were still alive. Financial support provided by children and their spouses to elderly parents was measured by the total value of cash, gifts, and food, etc. within last year. Financial support provided by elderly parents to children and their spouses (including their children under the age of 16) was measured by the total value of cash, gifts, and food, etc. within last year. Instrumental support provided by children and their spouses (including their children) to elderly parents included household chore help and personal care help. Instrumental support provided by elderly parents to children and their spouses (including their children) also included household chore help and personal care help. The principle for assigning the numeric values for those variables was the same as that used for the dependent variable. Emotional support refers to the closeness between children and elderly parents on average and was measured by the summation of the scores of three items such as “From different aspects, do you feel close to this child emotionally?”, “In general, do you think you get along well with this child?”, and “When you want to talk or face difficulties, do you think that your child is willing to listen to you?” with a range from 3 to 9.

Control variables. Children's age was measured by the age of the year when their parents passed away. Marital status of children included *married* and *unmarried* (reference group). Career of children included *agricultural* and *non-agricultural* (reference group). Education status of children was consisted of *illiterate* (reference group), *elementary school*, and *junior high and above*. Number of siblings of the child was the total number of living siblings of the child. Age at death of elderly parents included *younger than 75* and *75 and older* (reference group). Marital status at death of elderly parents was categorized into two groups *married* versus *unmarried* (reference group). Gender of elderly parents was measured by *male* versus *female* (reference group). Educational level of elderly parents was grouped into *literate* versus *illiterate* (reference group).

[Insert Table 1 here]

Tale 1 presents frequencies and means of all variables used in the analysis. The levels of caregiving at the end of life of elderly parents were higher among sons (5.54) compared to that of daughters (3.18). Middle children accounted for half of the sample (49.03% for sons, 51.78% for daughters) whereas single sons or single daughters accounted for the smallest portion of the sample (2.01% for sons, 1.89% for daughters). The percentage of sons coresiding or living in the same village as their elderly parents (17.72% or 38.38% respectively) was much higher compared to that of daughters (2.29% or 21.83% respectively). There was also a substantial number of sons living within the same province or outside (32.35%). The percentage of daughters living in the same village, same city, or same province and outside were approximately the same (21.83%, 25.66%, 24.19% respectively).

Analyses

Based on the theoretical framework, descriptive analyses, t-test/F-test and two-level hierarchical linear modeling (children as level 1 and family as level 2) was conducted among sons and daughters separately using STATA11. Random effects were introduced to eliminate the cluster effects caused by the fact that the children were nested within one family/parent (Goldstein,1987). Independent variables for level 1 were socio-demographics of children, birth order, physical distance, and intergenerational support exchange prior to the death of parents. Independent variables for level 2 were socio-demographics of elderly parents, and number of siblings of children.

Results

Descriptive Analyses

Table 2 presents the results from t-tests/F-tests for all variables. There were significant differences in level of end-of-life care based on marital status of children, birth order of children, physical distance from children to parents, and gender of elderly parents among sons and daughters, respectively. Married sons provided more end-of-life care compared to unmarried sons. Sons were shown to provide significantly more end-of-life care to older adults without a spouse compare to those with a spouse. However, marital status of children and that of elderly parents was not significantly correlated with end-of-life care. Regarding birth order of children, only son/daughter provided the most end-of-life care, followed by eldest son/daughter. In terms of physical distance, children who lived with elderly parents provided the most end-of-life care, followed by children living in the same village. The difference was more obvious when comparison between sons and daughters was made, that is, gender of children was used in the analysis. Sons tended to provide higher level of end-of-life care compared to that of daughters.

Hierarchical Linear Modeling

Table 3 demonstrates the findings from hierarchical linear modeling. Among all sons, eldest sons tended to provided the most end-of-life care whereas youngest sons tended to provide the least end-of-life care; Among all daughters, eldest daughters tend to provide the most of end-of-life care. Among all sons, sons living with elderly parents were shown to provide the most care at the end of life, followed by sons living within the same village, then followed by sons within the same county; Among all daughters, daughters living with elderly parents were shown to provide the most care at the end of life. Based on intergenerational support exchange prior to the deaths of elderly parents, sons who provided higher level of financial support to their parents tended to provide higher level of end-of-life care; sons and daughters who provided higher levels of instrumental support tended to provide higher level of end-of-life care. Sons who received higher level of instrumental support from elderly parent prior to their deaths were more likely to provide higher level of end-of-life care to their parents. Married sons tended to provide higher level of end-of-life care compared to their unmarried counterparts. Elderly parents with a spouse before death received significantly less end-of-life care from sons compared to those without a spouse before death. No matter sons or daughters, the higher number of living siblings, the lower level of end-of-life care provided to their elderly parents.

Discussion

At the end of life, older adults fighting with debilitating illnesses tend to need individualized personal care and household chore help. Family, as informal system, is the most suitable to meet the needs of frail elderly parents before deaths. In addition to the strong filial expectations among elderly parents in rural area, end-of-life care provided by children is of great importance and value (Chan & Chow,2006) and this area warrants further research. Findings of this study suggest, caregivers for older adults at the end stage were primarily sons including their

spouses and children. Birth order of children, marital status of children, physical distance between children and elderly parents, and intergenerational support exchange prior to the deaths of elderly parents were significantly correlated with the level of end-of-life care provided by adult children to their elderly parents.

Our findings show that even though the traditional old age support by eldest children, ideally sons stereotype was fading, birth order of children still plays an important part in end-of-life care for elderly parents. Birth order of children is one basic properties of a family and it often does not change in the life course. Birth order of children influences the expectations, attitudes, and behaviors of filial piety among both elderly parents and adult children. Birth order and modeling for younger siblings was one of the motivations for adult children to shoulder caregiving responsibilities for elderly parents at the end of life. Eldest sons or daughters often take on the most important care responsibility for dying parents. This behavior is congruent with the traditional Chinese culture featured with filial piety. That is a Chinese saying “eldest brother is like father, eldest daughter is like mother.” Another interesting saying is that “emperors love eldest son whereas civilians love youngest son.” However, in our study, the youngest son who tend to have the most attention and support from parents was shown to be the one provided the least care to elderly parents prior to their deaths.

Based on our findings, the impact of the decreasing number of children on end-of-life care for elderly parents is not as scary as initially thought, that is, eldest sons or eldest daughters were primary caretakers for elderly parents at the end stage. In western studies, children with less siblings were more likely to practice filial responsibilities in the process of socialization because their parents were not given much choice due to limited number of children in the family. In the summary by Smith, number of children was negatively related with the closeness between

elderly parents and their children .(Smith,1984) .Obviously, in families with fewer children, the level of caregiving for elderly parents will be heavier on children.

At the end of life among elderly parents, elderly parents tend to have intensive needs for caregiving. The labor division among children still follow the resource and cost-effective principles. Thought communication and transportation has been improved, physical distance is still a barrier for children to practice filial piety at the end of life of their parents. Young people from rural areas tend to migrate to other areas to seek better employment opportunities. This out-migration takes a toll on the family support system. Older adults in rural areas often coreside wor live close by sons as caregivers whereas live far from daughters, typically adjacent villages or counties. At the end-of-life care, children cohabitating or living in the same village contributed the most in taking care of elderly parents. Children who didn't live within the same village were much less likely to provide end-of-life care. Accompanying the industrialization and urbanization process, mass out-migration of adult children in rural areas and vast physical distance between children and elderly parents has greatly reduced the function of family as a primary end-of-life care institute.

Intergenerational support exchange is based on reciprocity principle. Adult children provided elderly parents with support is based on the investment of parents in the past. Children who received higher level of support from parents and those who provided higher level of financial and instrumental support were more likely to provide higher level of end-of-life care for their parents. Especially sons who had frequent intergenerational support exchange became the primary caregiver of their parents at the end stage. This finding is consistent with selective support exchange between parents and chosen children to reinforce old age support from chose children.

Gender of children plays an important part in end-of-life care among elderly parents. Caregiving responsibilities were primarily shouldered by sons as indicated in the norms of filial piety. Although sons tended to provide the most end-of-life care, daughters were more likely to pitch in if no sons physically available. The gendered perspective of caregiving is weakened in the context of mass out-migration of youth in the rural area. On the other hand, the adult children caregiving did not support the pattern in which children provide more care for parents of the same gender as theirs.

There are some limitations of this study. For example, end-of-life care provided by adult children was only measured by household chore help and personal care help. Help in other aspects such as transportation and health care should not be neglected. Intergenerational support exchange before deaths of elderly parents was extracted from the previous wave when elderly parents were still alive. It could not reflect the total support exchange in the life span.

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Table 1 Variables' coding scheme,means/propotions and SD

	Sons		Daughters	
	Means/Propotions	SD	Means/Propotions	SD
Dependent Variable				
End of life care	5.54	9.54	3.18	6.88
Independent Variable				
Sex of parents(Father)	49.47%		52.15%	
Birth order				
in the middle	49.03%		51.78%	
Eldest child	22.32%		25.75%	
Only child	2.01%		1.89%	
Youngest child	26.65%		20.58%	
Distance from parent				
Coresidence	17.72%		2.29%	
Same village	38.38%		21.83%	
Same town	4.75%		25.66%	
Same county	6.80%		24.19%	
Same or out of the province	32.35%		26.03%	
Intergenerational Exchange(2001)				
Fanancial support provided by child	1.85	1.01	1.91	0.73
Fanancial support provided by parent	0.36	0.77	0.21	0.57
Instrumental support provided by child	1.90	4.00	0.90	2.32

Instrumental support provided by parent	0.97	2.48	0.20	1.18
Emotional cohesion	7.06	1.61	7.43	1.47

Note: 1,557 adult son-parent dyads, corresponding to 708 death respondents observations. 1,355 adult daughter-parent dyads, corresponding to 660 death respondents observations.

Table 2 The t-tests/F-tests results

			Sons		Daughters		The t/F test between Sons/daughters
			Mean	t/F-tests	Mean	t/Ftests	
Children's Marital Status	已婚		5.78		3.14		***
	未婚		3.77	***	4.61	n.s.	n.s.
Sex of parents	Fathers	Married	3.52	***	2.14		**
		Widowed	6.63		3.18	**	***
	Mothers	Married	4.92		2.97		**
		Widowed	6.74	**	4.15	*	***
Child's birth order	Only child		14.53		8.87		*
	Eldest child		7.69	***	5.48	***	***
	In the middle		4.93		2.15		***
	Youngest child		4.17		2.38		***
Distance from parent	Coresidence		10.28		10.97		n.s.
	Same village		5.99		3.61		***
	Same town		3.10	***	3.24	***	n.s.
	Same county		2.92		2.91		n.s.
	Same or out of the province		3.39		2.29		**

Note: ***P<0.01, **P<0.05, *P<0.1

Table 3. Coefficient estimates of hierarchical linear model of end-of-life care provided by sons and daughters

	Sons（N=1,557）		Daughters（N=1,355）	
Fixed effects				
Birth order（*in the middle*）				
Only child	2.498	*	0.911	
Eldest child	1.322	**	2.953	***
Youngest child	-1.882	***	-0.667	
Distance from parent *(Same or out of the province*）				
Coresidence	4.762	***	6.368	***
Same village	1.682	***	0.655	
Same town	-1.027		0.625	
Same county	-1.654*		-0.317	
Intergenerational Exchange(2001)				
Fanancial support provided by child	0.436	*	-0.068	
Fanancial support provided by parent	-0.059		-0.397	
Instrumental support provided by child	0.187	***	0.262	***
Instrumental support provided by parent	0.203	**	-0.098	
Emotional cohesion	-0.081		-0.036	
Control variables				
Child's age	0.039		0.019	
Child's marital status (*not married*)	2.390	***	0.599	
Child's occupation (*not agriculture*)	-0.047		-0.379	
Education (*no formal education*)				

	Sons（N=1,557）	Daughters（N=1,355）
Primary school	0.003	-0.093
Middle school or above	0.040	0.699
Age of parents when they died(*75+*)	0.128	-0.401
Marital status of parents as they died(widowed)	-1.451 **	-0.611
Sex of parent(*female*)	0.274	-0.743
Education of parents (*no formal education*)	-0.192	-0.155
Number of siblings	-0.714 ***	-0.515 ***
Intercept	2.608	5.565 **
Random effects		
Sigma_u	4.677	2.376
Sigma_e	7.614	6.044
d.f.	22	22
Log Lik	-5575	-4449

Note: 1. The category in the brackets is the reference one. 2. *** p<0.01, ** p<0.05, * p<0.1