THE IMPACT OF MATERNAL CHARACTERISTICS ON GRANDCHILD CARE IN CHINA

A Thesis submitted to the Faculty of the Graduate School of Arts and Sciences of Georgetown University in partial fulfillment of the requirements for the degree of Master of Public Policy in Public Policy

By

Yu Shen, B.A.

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By: Yu Shen, B.A.
Thesis Advisor: Donna Ruane Morrison, Ph.D.

ABSTRACT

Assistance from grandparents in the upbringing of children is a long held tradition in China that has persisted despite major social and economic restructuring in recent decades. Grandparental involvement in the lives of their grandchildren takes many forms in contemporary China, ranging from little contact, to occasional babysitting, to the assumption of a surrogate parent role. Prior attempts to identify the factors that explain this heterogeneity have focused on structural constraints and opportunities, grandparents’ health and wealth, the adherence of sons to the Confucian virtue of filial piety, among others. However, the current study directly examines the relationship between a mother’s level of education and the probability that a co-residing grandparent will help care for her preschool-aged children. Using data from the China Health and Nutrition Survey, I use probit analysis to estimate a series of models that incrementally account for the influence of mother, child, and household characteristics. The results reveal that within three-generation households, grandchild care is positively associated with mothers’ educational attainment. However, mothers’ employment status does not appear to have a significant effect on grandchild care. In addition, the number of children in the household and the degree of urbanization in families’ geographical locations are also strong predictors of grandchild care.
The research and writing of this thesis
is dedicated to everyone who helped me along the way.

I owe my deepest gratitude to my adviser Dr. Donna Ruane Morrison.
This thesis would not have been possible without
her guidance and unconditional encouragement.

I would also like to thank my parents and Jerry for their endless love and support.

Many thanks,
Yu Shen
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For centuries, the importance of strong generational ties in China has been a cultural cornerstone. The Confucian virtue of filial piety emphasized the responsibility of children to respect, support, and obey their parents and it has been traditional for adult children and their parents to share a residence to facilitate this expectation.¹ Grandparents have traditionally assisted their adult sons and daughters by helping to raise their children. In addition to the high value placed on family solidarity, historians have argued that grandparents were motivated to provide childcare as a way to ensure a reasonable quality of care for themselves in their later years. Despite major economic, political, and cultural shifts in recent decades, grandchild care has become more, rather than less common in China, in both urban and rural settings. According to the Shanghai Municipal Population and Family Planning Commission, 90% of Chinese children receive some amount of care from their grandparents.² Moreover, unlike Western nations where modernization led to fragmented extended families, both three-generation (with grandparents, their grown children, and grandchildren) and “skipped generation” (with grandparents and grandchildren) households are common. In 2000, nearly two-thirds (61%) of


grandparents were living with their adult children and/or their grandchildren.³

Although the influence of centuries old expectations regarding the roles and responsibilities of parents and their children can not be understated, there is more to be understood about why parent-child reciprocity in caregiving and intergenerational co-residence have persisted in post-reform China when modernization in other counties has led to their abandonment. Structural explanations are the most prominent in the scholarly literature. For example, in the absence of a wide-scale government supported pension system, there is no viable alternative to family-provided care as people advance in age. In contrast, relatively little research attention has been given to the role of adult daughters and daughters-in-law in shaping the “demand side” of grandchild care. Yet, there are several reasons why the influence, preferences, constraints, and choices of mothers young children should not be overlooked. First, maternal employment would be expected to contribute to the practical need for someone to look after the children during work hours. Second, net of other socioeconomic factors, the contribution of mothers’ salaries may alter not only the nature and degree of support to grandparents that can be managed, but also the level of influence they may have in household decision-making. Third, mothers’ preferences regarding parenting style and types of childcare arrangements,

as well as their knowledge of child development may at least indirectly influence the likelihood of grandchild care.

**The Present Study**

The aim of the present study is to address that gap in the literature, by examining whether particular characteristics of Chinese mothers with young children influence the likelihood of co-residence with a grandparent and their provision of childcare. My primary interest is in the relationship between co-residential grandchild care and mothers’ knowledge of early childhood development and preferences for type of childcare for their children. The dataset I will use for this analysis is the China Health and Nutrition Survey (CHNS), a panel data on Chinese individuals, households, and communities. The dependent variable is a binary measure of whether a grandparent living in a three-generation household provides care for one or more grandchildren. Lacking a direct measure of mothers’ knowledge and preferences in the CHNS data, I will use mothers’ level of educational attainment as a proxy. The logic for is that higher levels of education expose one to a broader worldview and often instills a preference for newer and more modern approaches to things over more parochial perspectives. Other control variables include mothers’ working status, marital status, household income, number of children, urban setting, and the province in which the family resides. My research hypotheses are as follows:

H1: The higher the mother’s level of educational attainment, the greater the influence she
will enjoy in household decision-making

H2: The higher the mother’s level of educational attainment the lower the likelihood that co-residential grandparents will provide childcare, all else being equal.
BACKGROUND AND PRIOR RESEARCH

Trends in Grandchild Care

Grandchild care – the practice of grandparents either assisting in or assuming full responsibility for raising their grandchildren – is widespread throughout China. The type of care provided by grandparents ranges from occasional babysitting, to full-day childcare while parents are working, to full-time custodial care. Among children under two and a half years old in contemporary China, 60% receive the majority of their care from grandparents. The comparable figure is 40% among children aged three years and older. In terms of amount of grandchild care, 17% of grandparents provide at least 10 hours a week of childcare. In contrast, about one-third of preschoolers in the U.S. receive childcare from grandparents. The percentage is also lower in Italy, Spain, and Greece where 40% of grandparents provide childcare at least weekly to their grandchildren.

Backdrop for Grandchild Care

The reasons for grandchild care in China and the West share some similarities. In some


instances grandparents, their adult children and their grandchildren live together and combine both monetary and non-monetary resources out of economic necessity. For example, the percentage of mutigenerational families in the U.S. began to increase at the start of the economic crisis in 2007. In addition, grandchild care helps to make the demands of parenting more manageable in instances of separation, divorce, widowhood, births outside of marriage, and teen parenthood. Grandchild care also fills gaps in formal daycare for some families. Finally, as life expectancy has increased and older generations are generally healthier than in the past, many grandparents in recent decades enjoy the opportunity to be involved in the lives of their grandchildren. Despite some overlap in the explanations for grandchild care across various countries, some explanatory factors are unique to China.

**Explanations for Grandchild Care in China**

**Confucian Virtue of Filial Piety**

The prevalence of grandchild care in China is partly explained by the fact that the culture is deeply rooted in tradition and strongly held beliefs and expectations concerning intergenerational exchange and family solidarity. These ideals stem from Confucian teachings about the virtue of filial piety.\(^6\) A core value is that it is a child’s duty to

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respect and honor his or her parents. In the quote below, Confucius equates reverence for one’s parents as one of the distinguishing characteristics of humankind.

“Nowadays, one is called a filial son only because one is able to support one’s parents. Actually, even dogs and horses are no less able to do this. If one does not treat one’s parents with reverent respect, what is then the difference between him and animals?”

Parents are seen as having absolute authority and Chinese children are brought up with the understanding that it is unacceptable to challenge or disobey them. The elevated status of parents and the corresponding responsibility of adult children are also reinforced in contemporary China through popular television programs, films, and recently, even the law. The *Protection of Rights and Interests of the Aged* legislation was enacted in 2013 to underscore children’s responsibility for the care of their parents as they age. A case based on this law received widespread public attention; a 94-year-old woman sued her children for not taking care of her and the court order her children to take turns in caring for their mother. The reinforcement of filial duty serves a purpose beyond upholding tradition.

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8 94 year old Chinese woman sued her children for not taking care of her. (2013, October 13). *Fox News Health*. 

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is also a way for the government to minimize its own fiscal responsibility for providing health services and other support to its rapidly ageing population.

**Economic Reforms in China**

Another important part of the explanation for the prevalence of grandchild care in contemporary China is the structural context.

After Mao’s era, there was a shift from a centrally owned economy to a free market, in which state-owned enterprises (SOE) have transferred to the private sector. Following this transition, China’s family structures needed to adapt and traditional patterns address that need. For example, a lack of job opportunities in rural areas forced many young people, including married couples, to relocate to cities to find employment. It is too expensive for them to bring their children with them and they instead leave their children in the care of their grandparents. In 2014, two-thirds of Chinese three-year-olds were living in their grandparents’ homes. Grandparents receive remittances from their migrant sons and daughters in exchange for childcare. As a result, 20% of the households in rural

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China are split-generation, in that only grandparents and grandchildren live together.\textsuperscript{12} In addition, after China’s housing reform, adult children have to rely on their parents to a greater extent for financial and housing support.\textsuperscript{13}

After China’s rapid industrialization, women and elderly people in China found it especially difficult to find jobs in the formal sector.\textsuperscript{14} Since 1990, workers in SOE have decreased from 118,000 to 54,000.\textsuperscript{15} Along with the loss of jobs after reforms, many of the state-run childcare centers were closed, which obviously had an effect on women’s ability to be in the labor market.\textsuperscript{16}

Older Chinese citizens in rural areas are at high risk of poverty without the support of their grown children. Only 11\% of those in the rural workforce were covered by public pension system in 2007.\textsuperscript{17} Lacking in any source of formal social support, roughly

\textsuperscript{16} Yifan, H. (2012, June 10). \textit{How vulnerable is China’s pension system?} Retrieved from: http://www.china.org.cn/opinion/2012-06/10/content_25602529.htm
\textsuperscript{17} Du, F., & Dong, XY. (2013). Women’s employment and child care choices in urban China during the economic transition. \textit{Economic Development and Cultural Change, 62}(1), 131-155. doi: 10.1086/671714

Pension coverage still very low (2015, November 30). \textit{Sina (In Chinese).}
two-thirds of seniors in rural areas in China depend solely on their adult children, many of whom migrated to cities to find jobs for financial support. In exchange for cash remittances from their sons and daughters, a sizable share of grandparents in rural areas take primary responsibility for raising their grandchildren. These “skipped generation” households are necessitated by the prohibitive costs associated with bringing children to live in cities with their migrant parents.

**Lack of Public Support for an Aging Population**

The population of China is aging at a fast pace and will continue to do so well into the future. This represents a significant challenge to the pension system, as indicated by the total dependency ratio. This figure represents the ratio of the nonworking population (individuals either too young or too old to work) to the working population (ages 15 to 64), expressed as a percentage. In 2014, the total dependency ratio in China was 36.2 and is projected to increase to 61 by 2050. The old age dependency ratio (population older than 64 as a fraction of the population of working age) is especially important because it represents the group most likely in need of health care and causes the greatest strain on a

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country’s resources. The old-age dependency ratio was 12 in 2014, and is projected to increase approximately 0.8% year reaching 44 in 2050. Moreover, the retiring population will increase to more than 10% by then.\textsuperscript{20} Pension income, even when available, is not sufficient for seniors. It covers only about 45% of retirees’ incomes, on average, so they must turn to their adult children to make up for gaps.\textsuperscript{21} The size of China’s workforce is also shrinking. Between 2010 and 2050, the labor force in China will decrease from 72% to 61%.\textsuperscript{22} About 8% of elderly people lived alone in 2000, while 31% lived with a spouse, and 61.3% lived with their adult children and/or their spouse, grandchildren, or other non-relatives.\textsuperscript{23}

Therefore, many grandparents assist in raising their grandchildren as a way to ensure old age support. Caring for grandchildren establishes a quid pro quo relationship between the two generations.\textsuperscript{24} This may largely contribute to the practical necessity of parents living with their adult children. Another reason for co-residence is that China does not have a comprehensive government system of caring for elders, such as the Social Security


System in the U.S. In 2014, less than one-third of China’s total labor force was earning benefits under a basic pension system.\textsuperscript{25} Furthermore, the Chinese pension system is not without its problems. For example, Chinese citizens are forced to contribute 28% of their wages to receive a basic pension at retirement, almost the highest mandatory employee contribution in the world.\textsuperscript{26}

Finally, viable alternatives to grandchild care are lacking in rural parts of China. Public early childcare services are limited and expensive.\textsuperscript{27} Only about a third of rural children receive appropriate early childhood education, according to a recent study.\textsuperscript{28}

**The Influence of Mothers in Decisions about Childcare**

Prior research on the prevalence of grandchild care has not focused on the potential influence of mothers in determining the type of care that young children receive although there is reason to believe that they do. The assumption of the present study is that the

\textsuperscript{25} China National Statistical Yearbook (2014)
mechanism of this effect may be through mothers’ educational attainment. In the first place, mothers’ levels of education influences their salaries and the higher the economic resources available to the family the more affordable it becomes to purchase out-of-home care. This makes grandchild care less likely. In the second place, I would argue that education exposes them to a wider array of knowledge, including learning about optimal parenting and childcare practices. Thus, more highly educated mothers would be more aware of the importance of young children interacting with peers and being in a learning environment. In addition, to more information about childcare options, they would probably know more about the benefits of staying home with their children while they are young. Finally, a better-educated mother would not be as likely to agree with “traditional” values and the kind of discipline that her parents or parents-in-law would be likely to use when taking care of her children. The goal of the present study is to examine this question.
DATA AND METHODS

Data

I use the China Health and Nutrition Survey (CHNS) to address the research questions and hypotheses in this study. CHNS is an ongoing project, jointly directed by the Carolina Population Center at the University of North Carolina at Chapel Hill and the National Institute for Nutrition and Health (NINH, former National Institute of Nutrition and Food Safety) at the Chinese Center for Disease Control and Prevention (CCDC). The project was designed to “examine the effects of the health, nutrition, and family planning policies and programs implemented by national and local governments and to see how the social and economic transformation of Chinese society is affecting the health and nutritional status of its population.”\(^2^9\) The survey was conducted in 12 provinces: Beijing (added in 2011), Liaoning, Heilongjing, Shanghai (added 2011), Jiangsu, Shangdong, Henan, Hubei, Hunan, Guangxi, Guangzhou, Chongqing (added 2011). These provinces differ significantly by geographical location, economic development and cultural habits. The CHNS uses a stratified multistage random cluster design to draw the survey. There are about 7,200 households in the survey, with a total of 30,000 individuals. The survey also follows the families from time to time, with the exception when families move from...

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one community to a new community. The CHNS is considered by experts to be parallel to the national statistics of China.\textsuperscript{30}

Among the modules available, I use data from the household roster, time use questionnaire, household income and marriage history files, and the ‘mass relationship’ file. I also draw demographic variables from the appropriate files for mothers in my sample.

\textbf{Analysis Sample}

In the CHNS study, the childcare module was only administered in households with at least one child who was less than six-years-old. To be eligible for inclusion in the present analysis, both a mother and a grandparent must also be residing in that same household. Using these criteria, the resulting sample includes 165,312 households.

\textbf{Variables}

\textit{Dependent variable}

The dependent variable is a binary indicator of whether a co-residing grandparent assists

in providing childcare for a grandchild under six-years-old. Recall that daycare questions were only asked in households with children under age six. To make the determination regarding grandchild care, I first established whether each household member (other than the mother) provided care for any pre-school-aged children in the household. If this individual answered this question in the affirmative, I used the ‘mass relationship’ file to identify whether he/she was the grandparent. Observations meeting these criteria were coded “1,” or otherwise coded “0.”

**Key Explanatory Variable**

Mothers’ highest level of educational attainment is the prime explanatory variable of interest in this study. From a 7-category raw variable for educational attainment, I created a series of six dummy variables as follows: no formal schooling, primary school, lower middle school, upper middle school, technical or vocational degree, and college/university or graduate degree. The latter variable combines undergraduate and graduates degrees because the frequency of cases with Master’s level or higher degrees was too low on the raw variable (n=111) to make a separate dummy variable for this group.

**Additional Explanatory Variables**

In addition to mothers’ educational attainment, I account for other factors potentially
associated with the probability of grandchild care. Given the possibility that the availability of a grandparent to assist in caring for children influences a mother’s ability to work outside of the home, I include a dummy variable for mothers’ employment status (employed = 1). I also include a dummy variable for marital status (married = 1 and unmarried, divorced, separated, and widowed women = 0). A variable for total gross household income (in dollars) is reported in the original survey as a continuous variable. I take the natural log of this variable to use in the analyses to correct for the skewed distribution of the original measure. As a measure of constraints on mothers’ time, I use a continuous variable for the number of children in the household. To serve as proxies for the local childcare market, employment opportunities for females, cost of living, average salary levels and other important factors that vary geographically, I include a dummy variable for whether the family resides in an urban versus rural area (urban = 1) as well as a dummy variable for each of the 8 provinces included in the . Table 1 provides descriptive statistics for all of the variables included in my empirical models.

**Data Limitations**

There are several limits in the CHNS data that are relevant to the present analysis. First, the raw relationship variable does not differentiate between grandmothers and grandfathers. It only identifies whether the household member is a grandparent. This is unfortunate as there may be important gender differences in caregiving styles that
influence mothers’ preferences.

A second limitation is that the survey does not ascertain any information about the local childcare market (e.g., availability of different types of care, price, quality, convenience, etc.) nor local job opportunities. These factors undoubtedly influence decisions about mothers’ employment and childcare.

The fact that detailed information about childcare arrangements was only collected from approximately 2,000 respondents presents another limitation. We do not know whether the child receives other types of informal or formal daycare outside of the home and, if so, how much. Ideally, I would be able to control for these factors in my models predicting grandchild care.

It would also be advantageous to have more information about the time, health, financial, social, geographic, and other constraints that potentially influence the likelihood of grandparents taking care of their grandchildren. For example, I am not able to control for whether the grandparent has a pension or whether he/she assists in the care of the children of other sons or daughters.

Finally, the dataset does not allow me to control for the dynamics of decision-making in the household (e.g., whether husbands and wives have an equal voice) nor whether the
grandparents are mothers’ own parents or in-laws. Both factors would presumably influence the probability of shared residence with grandparents and their provision of grandchild care.

**Methodology**

Given the binary, rather than continuous nature of my dependent variable, ordinary least squares OLS regression is not appropriate for several reasons. First, it is an inefficient estimation method for dichotomous variables. Second, the linear probability model (LPM) assumed by OLS does not hold because LPM estimates are not constrained to range between the values of 0 and 1. Therefore, I use probit estimation, which overcomes these issues. Unlike LPM, probit estimation is not based on the assumption that the effects of independent variables are constant across values of the dependent variable. To understand independent and inter-dependent relationships among the explanatory variables, I estimate a series of models in which I incrementally introduce individual independent variables and blocks of related explanatory variables when appropriate.

**Methodological Limitations**

It is important to point out that several types of endogeneity problems will potentially influence the estimated effects of the explanatory variables in my models. The first relates to the possible simultaneity of grandchild care and mothers’ educational
attainment and employment status. To understand why, let us first assume that there is variation across married couples with young children and the relative importance they assign to the husbands’ versus the wives’ labor force participation, and relatedly, in their preferences concerning childcare if necessitated by the wives’ employment. In a culture where adult children are expected to support their parents as they age, it is reasonable to assume that couples would weigh the advantages of inviting parents(s) to live with them to the benefit of both parties. Couples’ considerations along these lines would likely include grandparent-related factors (e.g., their health, time constraints, and financial resources.) At the same time, Chinese grandparents, especially as they near retirement age, would be just as likely to be reflecting on similar matters. Under this scenario it is not only likely that the criteria being considered by both parties would overlap, it is also plausible that the grandparents’ exigencies and preferences could be the drivers of couples’ employment and daycare choices, rather than the other way around. Using an instrumental variables approach could attenuate this problem, but I was unable to implement that strategy in the present analysis.

A second potential problem is that my estimates will be biased due to omitted variables. For example, I don’t include a measure of mothers’ health status, which would undoubtedly influence decisions about their employment. Unfortunately there were too many cases with missing values that I could not include this measure.
RESULTS

The premise of this paper is that mothers’ educational levels serve as a proxy measure for their voice in household decision-making and for “modern” views about parenting, and as such would influence the probability that a co-residing grandparent would assist in childcare. Thus, my first step was to examine whether the prevalence of grandchild care varies by educational attainment. As shown in Table 2, there is scant evidence of a bivariate relationship between the two variables. The percent of grandchild care is relatively even across each category of education, ranging from about 11% to 14%. The prevalence of grandparents’ childcare is slightly greater for mothers with no formal education and lower for mothers with upper middle school degree.

Next, I addressed the question of whether the average “intensity” of grandchild care (measured as total hours of childcare reported by grandparents for the previous week) varies by mothers’ educational attainment. In contrast to Table 2, there is modest evidence of a positive relationship. The fewest hours of grandchild care is observed, somewhat surprisingly, among households with mothers without formal education (mean = 14 hours per week). Although these households would be expected to have the greatest need for two incomes, and the fewest resources for purchasing childcare, the first
generation members of these households would also be expected to be relatively poor and consequently be in poorer health. Thus, the grandparents in these three-generation families may be the least equipped of the families in the sample to handle the physical challenges of providing fulltime daycare for preschoolers. The intensity of grandchild care peaks at an average of 30 hours per week among mothers with a technical or vocational degree. Given that this is roughly equivalent to the hours of fulltime employment, it appears that the childcare contributions of grandparents in these households are pivotal for mothers’ work outside of the home. The intensity of grandchild care is roughly comparable across the remaining education categories, with the exception of the upper middle school category with about 15 hours per week on average.

As discussed, grandparents in three-generation households are often there to assist in taking care of young children. Commonly, this arrangement not only elevates the standard of living the grandparents enjoy in the present, it also secures the health care and other support they will need in their advanced years. At the same time, the young parents benefit from a reduction in the demands of raising young children, and in many cases, the mothers’ are given the opportunity to work for pay outside of the home, which may not have been possible otherwise. As shown in the second column of Table 4, the baseline model regresses employment status on the probability of grandchild care in multiple-generational home. Unexpectedly, there is a strong negative relationship
between mothers’ employment status and caregiving by co-residential grandparents. This may be due to the absence of other controls in the model related to the relationship and/or may reflect a different dynamic in decision-making than I hypothesized.

The next step was to add dummy variables to the baseline model for each of six levels of mothers’ completed education. The benchmark category is Bachelor’s degree or higher. In Model 2 we see that none of the coefficients for the education variables achieves statistical significance. The coefficient on working status remains unchanged in this model, which suggests that mothers’ level of education is unrelated to her working status. This is runs counter to results from other studies so it may be that a third variable, not included in the model, is suppressing the expected effect.

I introduce controls for marital status, number of children and household income in Model 3. I assume that both marital status and number of children would affect the “demand side” of grandchild care. Unmarried parents and couples with more children would presumably have a greater need for the assistance of the children’s grandparents. Having two married parents in the household theoretically lessens the intensity of caring for young children, so grandchild care might be particularly desirable to unmarried parents. Similarly, families with more children would be expected to have more time constraints regarding employment and leisure and may also find that grandchild care
alleviates some of this pressure. My expectations regarding the relationship between household income and grandchild care are mixed. On the one hand, having more income presumably makes other childcare options more affordable, but it may also increases the likelihood that the couple can afford to provide “room and board” for grandparents and grandchild care is secondary to that decision.

After adding in these three additional variables, we see a change in the observed effect of mothers’ educational attainment. In comparison to mothers’ with a minimum of a BA degree, mothers at all education levels, except vocational/technical training, are more likely to rely upon grandchild care at least part of the time. For example, mothers without any formal education are 38% more likely to rely upon grandchild care than their counterparts with college or graduate degrees. We see a marked drop-off in the probability of having grandchild care among mothers who complete more than primary school. Mothers with a middle upper school degree are 28% more likely to choose grandchild care than mothers with university/college degrees. Turning to the three newly added variables in this model, we see that net of household income, the number of children has a statistically significant negative effect on the likelihood of grandparent care. Specifically, the likelihood of grandchild care declines by 11% with each additional child in the household. The coefficients on marital status and mothers’ employment status lose significance in this model. The weak effect of mothers’ employment is unexpected.
In Model 4, I attempt to capture the influence of both the local childcare and labor markets by introducing two types of geographic variables. The first is a dummy variable for whether the family lives in an urban (= 1) or rural area (= 0) and the second type is a regional measure. I include dummy variables for each of the 12 provinces included in the CHNS survey. In keeping with my expectations that grandchild care would be in greater competition with other childcare choices in urban versus rural settings, the results reveal a statistically significant negative relationship between grandchild care and urban status. Among the provinces in the study, only four appear to be distinct in terms of grandchild care; Heilongjiang, Liaoning, Henan and Guangxi. The benchmark is Guizhou -- the poorest province in China in terms of per capita GDP.\(^{31}\) Mothers from Liaoning and Heilongjiang, in the northeastern side of China, are about 26\% less likely than mothers in Guizhou to choose grandchild care. These richer provinces have more resources to invest in public childcare institutions and broaden the options for families. We can also see that mothers who live in Henan, the third most highly populated province in China, are 25\% more likely to choose grandchild care than mothers from Guizhou.\(^{32}\) With a population of 34 million, it is reasonable to expect that public institutions for early child education


would be limited and constrain the choices for childcare. Lastly, mothers with young children in Guangxi are 26% more likely than their counterparts in Guizhou to choose grandparent-provided childcare. It is commonly known in China, that Guangxi is a province that is famous for its longevity.\textsuperscript{33} If it is true that living in Guangxi confers robust health, then it is not surprising that grandparents living there would be both more willing to care for their grandchildren and perhaps more sought after for this role by the children’s mothers.

CONCLUSION

Even though China has undergone revolutionary economic and social reform, some traditional family patterns have persisted. A large share of Chinese grandparents lives with their adult children and grandchildren. The older generation shares the responsibility for taking care of the youngest generation. Part of the explanation for this living arrangement is that the virtue of filial piety places expectations on children to respect their parents and care for them in old age. However, this backdrop of tradition doesn’t fully explain why parent-child reciprocity in caregiving and intergenerational co-residence has persisted in post-reform China when modernization in other counties has led to their abandonment. Since China does not have a wide-scale government supported pension system, there is no other option besides family-provided care as people get older. A less well-explored explanation of the persistence of grandchild care is the role that adult daughters and daughters-in-law have when families make decisions about childcare. It is reasonable to expect that their preferences, constraints, and choices would matter.

This paper explores what mothers’ characteristics relate to their decisions about grandchild care. According to the results, mothers’ employment does not have a strong
correlation with grandchild care. I hypothesized that the higher the level of mothers’
education, the lower the likelihood of grandparent childcare, and the results provided
modest support. There was not evidence of a strong linear pattern. Coefficients on
dummy variables for distinct levels of education only achieved statistical significance in
the cases of no formal education, primary, and lower middle education.

The findings of this study also demonstrate a relationship between the number of children
and the likelihood of grandchild care. This makes sense because as resources (time and
income) become stretched, grandchild care becomes a more attractive option. In addition,
household income had a statistically significant relationship with grandchild care, but in
ta direction I did not expect. That is, households with higher gross incomes showed a
greater likelihood of relying upon grandparents for grandchild care in comparison to
households with lower incomes. Contextual factors, urban versus rural residence, and
provinces where families reside were also associated with the probability of grandchild
care. For example, grandchild care occurs less often in urban areas, which is probably
due to the larger array of childcare options available in cities. The results also showed
that grandchild care is more likely to be found in the Heilongjiang and Liaoning
provinces and less likely to be found in the Henan and Guangxi provinces.
BIBLIOGRAPHY


Table 1. Means and Standard Deviations for Variables in Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
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<td>Grandchild care (grandchild care = 1)</td>
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<tr>
<td>Mother’s Level of Education</td>
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<td>College or Graduate Degree</td>
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<td>Mother’s Employment Status (working =1)</td>
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<td>Mother’s Marital Status (married = 1)</td>
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<tr>
<td>Gross Household Income</td>
<td>9.23</td>
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</tr>
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<td>1.01</td>
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<td>0.28</td>
</tr>
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<td>0.05</td>
<td>0.21</td>
</tr>
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<td>0.32</td>
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<tr>
<td>Shangdong</td>
<td>0.08</td>
<td>0.27</td>
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<tr>
<td>Henan</td>
<td>0.14</td>
<td>0.34</td>
</tr>
<tr>
<td>Hubei</td>
<td>0.12</td>
<td>0.33</td>
</tr>
<tr>
<td>Hunan</td>
<td>0.10</td>
<td>0.30</td>
</tr>
<tr>
<td>Guangxi</td>
<td>0.17</td>
<td>0.38</td>
</tr>
<tr>
<td>Guizhou</td>
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<td>0.36</td>
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Source: China Health and Nutrition Survey (CHNS)
<table>
<thead>
<tr>
<th>Mother’s Level of Education</th>
<th>Grandparent Provided Childcare in Previous Week (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>13.18%</td>
</tr>
<tr>
<td>Primary</td>
<td>11.52%</td>
</tr>
<tr>
<td>Lower Middle</td>
<td>11.52%</td>
</tr>
<tr>
<td>Upper Middle</td>
<td>10.51%</td>
</tr>
<tr>
<td>Vocational/Technical</td>
<td>11.52%</td>
</tr>
<tr>
<td>College or Graduate Degree</td>
<td>11.95%</td>
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Source: China Health and Nutrition Survey (CHNS)
<table>
<thead>
<tr>
<th>Mother’s Level of Education</th>
<th>Mean Amount of Grandparent Provided Childcare in Previous Week</th>
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<tr>
<td>Primary</td>
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<td>Lower Middle</td>
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<tr>
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<td>15.39</td>
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<tr>
<td>Vocational/Technical</td>
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<tr>
<td>College or Graduate Degree</td>
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</table>

Source: China Health and Nutrition Survey (CHNS)
Table 4: Coefficients for Models of Mother’s Characteristics on Grandparenting

<table>
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<th></th>
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<th>MODEL 2</th>
<th>MODEL 3</th>
<th>MODEL 4</th>
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</thead>
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<td>0.38***</td>
<td>0.37***</td>
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<tr>
<td>Primary</td>
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<td>0.38***</td>
<td>0.37***</td>
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<tr>
<td>Lower Middle</td>
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<td>0.29**</td>
<td>0.27*</td>
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</tr>
<tr>
<td>Upper Middle</td>
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<td>0.28*</td>
<td>0.23</td>
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<tr>
<td>Vocational/Technical</td>
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<td>0.25</td>
<td>0.22</td>
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<tr>
<td>Mother’s Employment Status (working =1)</td>
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<td>-0.23***</td>
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<td>-0.06</td>
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<td>Mother’s Marital Status (married =1)</td>
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<td>-0.03</td>
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<td>Gross Household Income</td>
<td>0.03*</td>
<td></td>
<td>0.04***</td>
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</tr>
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<td>Number of Children</td>
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<td></td>
<td>-0.13***</td>
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</tr>
<tr>
<td>Resides in Urban Setting (urban = 1)</td>
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<td></td>
<td>-0.12**</td>
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<tr>
<td>Province</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Liaoning</td>
<td>-0.25**</td>
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<tr>
<td>Heilongjiang</td>
<td>-0.28**</td>
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<tr>
<td>Henan</td>
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<td>Hubei</td>
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<td>Hunan</td>
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<td>Guangxi</td>
<td>0.26***</td>
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</tbody>
</table>

R²          | 0.01 | 0.07 | 0.01 | 0.02 |
N           | 21,749 | 21,022 | 5,862 | 5,862 |

Notes:

1. Level of statistical significance: † <= .10; * < .05; ** < .01; *** < .001
2. Source: China Health and Nutrition Survey (CHNS)