Socioeconomic Characteristics and Health in Old Age: Intergenerational Influences in the Chinese Family

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Substantial evidence across a number of societies and across the life course links socioeconomic status (SES) and health (House 2002; Knesebeck et al. 2003; Marmot 1995; Melzer et al. 2001; Pappas et al. 1993; Robert and House 1994; Rogers 1992; Ross and Wu 1995; Zimmer and Amornsirisomboon 2000; Zimmer and Kwong 2003). Most research on the topic focuses on SES of individuals, but more recent studies have also examined links between SES of family members, often parents, and one's own health in adult life (see Crimmins, Hayward, and Seeman 2004). The current study extends research conducted in Taiwan that showed that the education of an adult child can have substantial influences on health in old age over and above one's own level of education (Zimmer et al. 2002). This suggests that SES of children may be critical for understanding the health of older adults in some societies.

In the current study, we examine the effects of one's own occupation as well as that of one's children on health among older adults in China. We will also examine whether sex, proximity (whether coresiding or not), and biological relation (biological versus in-law) of children also matters. Finally, we will examine the extent to which support exchanges and family interaction between older adults and their children and other family members account for the impact of children's occupation on health of older adults. Our main objective is to shed further light on this "upward" intergenerational SES effect in order to better understand the complexity of stratification in determining health in old age.

Families interact, exchange support and influence each other in multitude of ways which shape the life experience of the members across the life course (Ross, Mirowsky and Goldsteen

1990). Even in old age, individuals are often active participants in family support exchanges and interactions (Agree et al., 2002; Agree, Biddlecom, and Valente 2005). The impact of family is likely to be particularly salient in old age when one is at the greatest risk of experiencing functional limitation and other health problems that occur with advancing age (Cornman et al., 2003). Declining health in old age can involve family in various ways. Adult children can, for example, provide care, financial assistance and health-related advice that can assist in manipulating a health care system and obtaining timely care. They can also help decide and coordinate the subsequent actions necessary to maintain health.

China provides an interesting context for the current study. High levels of family cohesion, interaction, and coresidence between parents and adult children exist (Peng and Guo 2000; Poston and Duan 2000). This is the case despite three decades of rule under Mao Zedong during which the function of family unit was undermined, followed by three decades of drastic social, economic and demographic changes in the post-Mao era. There are also wide generation gaps in occupation as well as information and resources available to the current cohorts of elderly and their adult children (Herrell 2000). The strong reliance on children for support in old age stems from Confucian culture and its emphasis on filial piety (Zhan et al., 2006). The patriarchal and patrilocal tradition in China also stipulates that a son, often the eldest, and his family lives with his parents and care for them in old age. The reliance on children also reflects a lack of comprehensive public programs for the elderly (Wu et al., 2005; Zhang 2006). Children's ability to mobilize additional resources to assist the parent's in meeting the health needs, therefore, may have implications for health of the Chinese elderly. Finally, a focus on China is timely given its rapid aging of the population and growing concerns for its consequences on the future health care needs in the population (Lee 2004; Wang et al., 2005).

Data and Measures. We will use data from 1992 and 1997 waves of the Beijing Multidimensional Longitudinal Study of Aging conducted by the Capital University of Medical Sciences in Beijing, China. The baseline survey in 1992 interviewed a representative sample of 3,257 older adults aged 55 and over living in three districts in the Beijing municipality (Xuan Wu, Da Xing, and Huai Rou). The three districts were selected based on their abilities to represent the total municipal area with respect to socioeconomic, demographic and geographical characteristics. The 1997 follow-up re-interviewed those who were still living in original households or within the same area. The response rate and the follow-up rate for the 1992 and 1997 surveys, respectively, were both around 90% (Department of Social Medicine 1995).

In both the 1992 and 1997 surveys, respondents were asked whether they could perform a series of functioning tasks, such as ADLs (Katz et al. 1963) and Nagi measures (Nagi 1965), without any help from others. Response categories for each item were "independent", "with some help", and "totally dependent". We measure functional health using the following six indicators that are available in both surveys: walking 300 meters, getting on and off a bed, walking up and down a flight of stairs, bathing, dressing, and eating.

We measure occupation as a categorical variable reflecting the following levels: high (white-color managerial), middle (white-color), and low (physical labor or home keeping), with this measure being considered for the respondent and for his or her child with the highest level of occupation. We measure occupation of older adults as one that was held most of their life. We use the occupational status of the highest occupation child because the health of an older adult is likely to be most influenced by the child who has the greatest resources available, which is measured by the child with the highest level occupation.

Analytic Approach. The basic association we are going to examine is the one between

health of the older adults and one's own occupation and one's child's occupation. We will, however, examine additional models in order to get a better understanding of the initial and zero-order associations. We will first incorporate child's sex, coresidence status, and biological relation in the indicator of the occupation of highest occupation child (e.g., coresident biological son, noncoresident daughter-in-law). Sex of the child and their proximity are important factors to consider because of the sex-specific norm of coresidence mentioned earlier. Also, because men have greater earning potential than women, parents may disproportionately rely on their sons for financial support and daughters for caregiving (Hermalin et al. 1996). The occupation of a child who lives together is also likely be more influential than that of a child living apart.

Next, we will examine other child characteristics such as total number of coresident children and children not living together, both biological and in-laws. This should account for the overall availability of support from children. In addition, we control for a measure of income of the respondent from various sources of support including those from children to adjust the results for economic well-being, so that we can examine the influences of child's occupation beyond those that are financial.

To explore factors underlying the relationship between children's occupation and health of older adults, we measure frequency of interaction, and help with housework and finance received from the children and other family members as well as those that the older adults provided to them. We also consider availability of help if needs arise, quality of interaction, and sufficiency of the help received, as perceived by older adults. In all our models, we control for basic demographic characteristics of the older adults, namely, age, sex, marital status, and urban versus rural residence that are likely associated with both occupation and health outcome.

Description of Preliminary Results. Preliminary analysis show that having a child with high occupational status proves to be a significant predictor of both whether an older adult has died or is functionally dependent at the end of a five-year study period. In contrast, own occupational level of an older adult is a significant predictor only of functional status but not mortality. Further analysis by sex, proximity, and in-law status reveals that it is only having coresident biological sons with high occupational status that has any significant effect on health and mortality. Because we control for income, the association between coresident son's occupation and health extends beyond his ability to contribute financially to the parent's household. Controlling for total numbers of coresident and noncoresident children also means that we are not simply capturing the overall availability of support from children. Additional analysis planned for this paper will take advantage of the information available on interactions and the types and levels of support exchanged between older adults and the children and other family members to examine how much these factors account for the association between coresident son's occupation and health in old age.

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Table 1: Descriptive Statistics for the Characteristics of Respondents

Variable	Mean	Std.Dev.
Age	64.99	*7.73*
Female	0.50	*0.50*
Married	0.76	*0.43*
Occupational Status:		
Low	0.57	*0.49*
Middle	0.25	*0.43*
High	0.18	*0.39*
Income (in yuan)	170.76	*162.32*
# of Coresident Children	4.60	*2.53*
# of Non-coresident Children	1.18	*1.08*
Urban Residence	0.50	*0.50*

Table 2: Functional Status of Respondents at Baseline (1992) and Follow-up (1997)

	Status at Baseline		
Status at Follow-up	No Functional Limitation	Has Functional Limitation	Row Total
No Functional Limitation	68.0	14.1	62.4
Has Functional Limitation	8.5	26.0	10.4
Deceased	12.3	51.7	16.5
Missing Data	11.1	8.2	10.8
Column Total (%)	100.0	100.0	100.0 (%)
Column Total (N)	2913	343	3,256 (N)

Table 3: Proportion of Respondents in Categories Defined by Occupational Status of the Child with the Highest Occupation, Coresidency, Biological Relation, and Sex

	Coresident				Non-coresident			
	Biological		In-law		Biological		In-law	
Occupational Status	Son	Daughter	Son	Daughter	Son	Daughter	Son	Daughter
Low	0.21	0.04	0.01	0.16	0.25	0.35	0.22	0.14
Middle	0.22	0.07	0.02	0.13	0.29	0.28	0.30	0.10
High	0.09	0.05	0.02	0.05	0.15	0.14	0.16	0.03
None*	0.48	0.83	0.94	0.66	0.30	0.23	0.32	0.73
Column Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

*No child under this category