Living arrangement and psychological well-being of elders in China

(Preliminary draft)

Wencheng Zhang

School of Sociology and Population Studies,
Renmin University of China

&

Jianlin Niu

Institute of Population and Labor Economics,
Chinese Academy of Social Sciences

Abstract

Objectives. This investigation examines how the living arrangement with adult children influences the psychological well-being of elder parents in China.

Methods. We make use of the survey data collected through the 2010 Chinese Family Panel Studies (CFPS) in this study, and we used multiple regression in order to estimate the effects of   living arrangements and mental health of the elderly in China.

Results. Comparing with the elderly who live with children, males report much more depression symptom than their female counterparts did when they live apart from their children, which mean that males are more vulnerable to the distance they live from their children. Living arrangement is not considerably correlated with the mental health of elders when we analyze the rural and urban areas separately. Elders having a living spouse reports more depression symptom than the elders who do not have, it seem that marriage do not buffering the mental health problems significantly.

Discussion. The findings in this study suggest that the living arrangement is associated with the mental health of the elders. Specifically, it poses greater influence to male than females, and causes more depression symptoms among elders who have a spouse.

Introduction

Family is highly valued in China, especially for its merit of old-age caring and supporting. Intact marriage is precious for individuals at old ages in order to maintaining a merry and healthy life (e.g., Lawton et al., 1984). Yet, for biological, social and cultural reasons, the likelihood of marital failure (via widowhood, divorce or others) ascends by age. As a result, intergenerational family support becomes more and more important for individuals' socioeconomic and psychological wellbeing at old ages. This is especially true in societies where social supporting system for the elderly is underdeveloped.

In China, living with elder parents is traditionally very common, especially when the elder parents lose their spouse or are in poor health condition. It has been proven that living arrangement has significant relevance to older people's wellbeing (Wang, 2012; Zhang, 2013; et al.). Living with adult children voluntarily promotes or protects elder parents' health significantly. However, partly for the reason of dramatic demographic transition and social evolution, the traditional living arrangement and caring pattern in China has changed subtly in recent decades (Hesketh et al. 2005). Ever since the 1970s, China has observed rapid fertility decline. As a result, the number of adult children declines rapidly and the share of elderly population increases subsequently. In addition, the ever-increasing migration of working-age population also introduces practical challenges to the traditional family living arrangement. Actually, the proportion of the elders who did not live with their children had increased significantly in recent decades, and the living arrangement of the Chinese

elders jointly affected by three factors: the fertility transition since 1970s, the improvement of the socioeconomic conditions on the living strategies of the Chinese people, and the filial culture of China(Zeng and Wang , 2004).

On account of the development of modern communication technology and transportation, more attentions are paid to the living distance between elder parents and their children. Technological advances in communication techniques helped to maintain a high degree of contact among the family members who lived far away from each other(Litwak, 1960). There are studies that suggest that nowadays more elders preferred not to live with their children. According to a survey conducted in Beijing, Tianjin, Shanghai and Chongqing in 2005, 41.5% of the elders were not willing to live with their children, but 73.2% of them wished that they could live near their children to get timely attendance(Lu, Bai& Liu, 2008). Thus, living near to children may be more preferable to elders. It has been found that noncoresident sons and daughters living close to parents have frequent contacts with their parents, and provide regular help to parents(Bian, Rogan & Bian, 1998). Xie(2009) reports that although the residential arrangements of the elders and living distances from their children do not affect significantly the economic support given by the children, they affect daily care and emotional support from the children. The shorter is the living distance, the more daily care and emotional support is given by the children(Guihua Xie, 2009). As previous studies have documented the availability of intergenerational support of different living arrangements and living distance from their children, we are to examine the impact of the living distance from their children on the mental

health of the elders.

In this study, we use survey data from the Chinese Family Panel Studies(CFPS) to investigate the impact of family living arrangement on the elder parents' psychological wellbeing. Cohort variations will be examined to throw light on the dynamics of family support and wellbeing of the elderly in contemporary China. Compared with other studies, our research contributes to the literature in the following aspects: First, we use a latest nationally representative sample survey of families, which makes it possible to extend and update our knowledge about the phenomenon under study. Second, we conduct our study separately for men and women. This will give further insights into the gender differences in the issue of pursuing a healthy and joyful late life. Third, we take into account dramatic differences between rural China and its urban counterparts.

Hypotheses

We hypothesize that living arrangements has significant effect on the mental health of the elders. Among the different living arrangements, we expect the elders living both their spouse and children have the best mental health condition. They ought to be followed by the elders living with children(without spouse). And the farther their children lives away from them, the worse their mental condition would be.

We also hypothesize that the effect of the living arrangement on the mental health of the elders varies by gender. Generally speaking, men benefit more from marriage

than women. Thus, we hypotheses that for those who did not live with spouse, male reports more mental health problems than females.

As the elders living in rural and urban areas have quite different living conditions and sociodemograghic characters, we hypothesize that the association between the living arrangement and mental health varies by regions.

Data and Methods

Data

We make use of the survey data collected through the 2010 Chinese Family Panel Studies (CFPS) in this study. The CFPS is a nationally representative survey of Chinese communities, families, and individuals launched in 2010 by the Institute of Social Science Survey (ISSS) of Peking University, China. The survey is designed to collect individual-, family-, and community-level longitudinal data in contemporary China. The survey targets at the Chinese families from 25 mainland provinces[1] in China, which represents 94.5% of the national population in China. In total, 33,600 adult respondents from 14,799 families are surveyed successfully. In this study, we will focus on the respondents aged 65 and above in the CFPS 2010.

The survey collected rich information on the socioeconomic, physical and psychological wellbeing of the Chinese population. To the special interest of our current study, detailed measures on individuals' socioeconomic characteristics, physical and psychological wellbeing, family traits, intergenerational relation and

---

[1] The sample area covers 25 mainland provinces, with the exception to Xinjiang, Tibet, Qinghai, Inner Mongolia, Ningxia, and Hainan. More details about the survey are available at the survey website: http://www.isss.edu.cn/index.php?catid=7&action=index

living arrangement, will be used in the analysis.

Variables and measures

In this study, we are interested in examining the changing impact of living arrangement on the elder's psychological wellbeing in light of the demographic and social-cultural transitions in recent decades. Specifically, we aim to address the following questions: What is the relation between living arrangement and the elder's mental health today in China? Is there any cohort or generational difference in the relationship? How do other family characteristics or contextual factors, such as marital status and place of residence, mediate or affect the relationship between living arrangement and the elder's psychological well-being?

To answer these questions, we employ multivariate regression models in the analysis. The outcome variable is psychological wellbeing (DV), measured with a six-item scale indicating the frequency of experiencing various psychological conditions during the past month, all of which are the indicators of depression symptoms. They are:"Feel depressed and cannot cheer up no matter what you are doing", "Feel nervous ", "Feel upset and cannot remain calm", "Feel hopeless about the future", "Feel that everything is difficult" and "Think life is meaningless".Responses to each item are rated on a scale of 1-5(1=Almost every day to 5=Never).

By adding them together, we got a variable that ranges from 6 to 30, in which 6 represents the slightest symptom of the depression on and 30 represents the most

serious condition of depression. Reverse coding was conducted thus the score represents the mental health of the elders. A higher score indicates better mental health condition after reverse coding.

The key independent variable (IV) is family living arrangement of the elder. CFPS2010 provides specific information about the living locations of each child of the respondents.We can get eight categories of the living locations of the children from their parents. Given the geographic similarity of the categories and the limited number of the samples in some categories, we combined some items of living arrangement. Thus, the living arrangement contains four groups, and they are: "Living with children", "Same neighborhood/Next door or Same village/street", "Different village/street in the same county/district or Different dfistrict in the same city" and "Different county in the same province or Different province or Outside of Mainland China". When living arrangement is used as a predictor, it is treated as a set of dummy variables(with "Living with children" as a reference category).

Age groups for the study are: 65-70, 70-75, 75-80 and 80 or above. Education was indexed into years. Living places(urban=1) and marital status(having a living spouse=1) are dummy variables. Marital status includes two group: having a living spouse and do not having a living spouse. The first category includes the condition of cohabitation and being married; the second category includes the condition of widowed, divorced and never married.The personal income is measured by the results of personal income divided by 1000, and financial support from relatives and families was measured by the result of the financial aid from families and relatives divided by

1000. Physical health status is measured by a scale with seven items of activities of daily living, ranged from 0 to 42. 0 represent the best abilities of activities of daily living, while 42 represent the opposite.We also add the number of adult children of the elders, and respondent who does not have a children was not included. All the analyses are conducted separately for men and women, for the rural elderly and the urban ones, and for the elders who having a living spouse and the elders who do not have a living spouse.

Results

Description of the sample

   The sociodemographic and mental health characteristics of the sample are shown in the Table 1. The number of female and male in the sample are almost the same.The proportion of women in the group of the oldest elders(aged 80 or above) is higher than that of men in the same group,which is consistent with the prior findings that female has long life expectancy than male did, and they are more likely to experience widowhood(Lee & De, 2007).The table also reveals that urban elders has long life expectancy than the rural elders.When the respondents get older,the porportion of elders who has a spouse decreases accordingly, which indicates the risk of being widowed increases with age.

   Most of the respondents report good health condition(3.32,ranged from 0-42, 0 represents the best physical condition, while 42 represent the opposite), which

meaned that they did not need much help for their activities of daily living,but the physical health conditions differs by gender, living places and marital status.Specifically,male reports better physical health condition than their female counterparts;rural elders had worse physical health conditions than their urban counterparts;elders who do not have a living spouse reports more difficulty in their activities of daily living than elders who has a spouse.

The majority of the respondents have education below the primary school(3.18 years).There are difference across gender, living places and marital status.Men have higher education degree than female,elders living in urban areas reports higher education than their rural counterparts and elders who having a spouse report higher education degree.

On average, respondents' mean score on the mental health is 9.46 (range=6 - 30),which indicated that most of them reported some depression symptoms.Specifically, men reports more mental health problems than their female counterparts,and elders living in rural areas report more depression symptoms than their urban counterparts.Elders who do not have a living spouse appears to have better mental health conditions than the elders who have a living spouse, which is not in the expected direction,and further analysis will be conducted to examine the role of marriage in the mental health of elders.

As expected, males reports much more personal income than females and elders living in urban areas reports more personal income than their rural counterparts. Number of children is similar among different groups.

Living arrangement also varies by gender, living places and marital status.For the items of "living with children",females reported 3.68% higher than their male counterparts, while the proportion of male who live near their children(Same neighborhood/Next door or Same village/street) is higher than that of females. Rural elders were more likely to live with their children or live near their children than their urban counterparts.Elders without living spouse were more likely to live with their children than the elders who had a living spouse, probably for their reliance on the daily caring.

Associations of living arrangement and mental health

In table 2, males scores significantly lower on mental health than women in both models,and the respondents in the group of oldest age also reports significantly worse mental health conditions than their counterparts in the group of youngest group,which indicates the serious mental problems among the oldest elders in China.Elders with higher degrees of education,living in urban areas and having higher income reports more depression symptoms.What is not consistent with the prior studies is that physically healthier elders reports more depression symptoms than the unhealthy elders.Table 1 also shows the inconsistency between the physical health and mental health.Generally, men reported better physical health than females, while females had better mental health conditions than males.It is similar with the living places and marital conditions.The result needs to be further examined.Number of children has positive effect on the mental health of elders.

When we add the living arrangement to the model,elders in the group of living arrangement 3 (Different village/street in the same county/district or Different district in the same city) reports more depression symptoms than the elders who live with their children.

Sex differences in the association of living arrangement and mental health

The multiple regression models separated by gender for mental health are reported in Table 3.Old age can cause harmful effects to both males and females, but it is more harmful to females than males.Year of schooling,living in urban areas and having better physical health   negatively correlated with the mental health of both males and females, but the negative effect of personal income is not significant in the female group.

Comparing with the elderly who live with children,males report much more depression symptom than their female counterparts did when they live apart from their children,which mean that males are more vulnerable to the distance they live from their children.The farther males lives away from their children,the more harmful effects it causes to male respondents' mental health. The result support our hypotheses that the association of living arrangement varies by gender.

Differences of associations of living arrangement and mental health between urban and rural areas

The multiple regression models separated by rural and urban areas for mental health are reported in Table 4. Both the males in the rural and urban areas report more

depression symptoms than their female counterparts.Comparing with their urban counterparts, elders living in rural areas with age 80 or above reports more depression symptoms, which indicates more serious mental problems among the oldest elders in rural areas. Year of schooling and physical health still negatively effect the mental health conditions in both rural and urban areas, but the negative effect of personal income is not significant in urban areas.Living arrangement is not considerably correlated with the mental health of elders when we analyze the rural and urban areas separately.

Differences of associations of living arrangement and mental health between different marital status

Differences of associations of living arrangement and mental health between different marital status is reported in table 5.Having a living spouse or not,males reports higher depression symptoms than females,but the negative effect on mental health is greater when males do not have a living spouse,which is consistent with the prior studies that male generally benefit more from marriage.Having a living spouse or not, the oldest elders reports much more depression symptoms than the youngest group.However, old age cause more harmful effects to the elders who do not have a living spouse.

Living arrangements associated with the mental health of elders in the group of "Having a living spouse",which is inconsistent with our hypothesis that elders who do not have a living spouse is more vulnerable to living apart from their children.

Discussion

Using survey data from the Chinese Family Panel Studies, we found that living arrangement has influence on the elder parents' psychological wellbeing. Elders living apart from their children reported more depression symptoms than the elders living with their children.

Regarding the gender differences in the association between living arrangement and mental health, results indicate that living without spouse poses greater depression risks among women than men. Actually, men report more symptoms of depression than women significantly. For females, being older increase the bigger risks of depression than men did. However, men are more vulnerable to the longer distance to their children.

This study has several limitations. Firstly, the more specific living arrangement of different living distances should be taken into consideration, such as the living with their grandchildren but not their children, or other non-relative members.Secondly, many other factors may associate with the mental health of the elders besides the variables in this study.

In conclusion, the findings in this study suggest that the living arrangement is associated with the mental health of the elders, specifically, it poses greater influence to male than females, and causes more depression symptoms among elders who have a living spouse than the elders who do not have.

Reference

Hesketh, Therese, Li Lu & Weixing Zhu, 2005, "The Effect Of China's One-Child Family Policy After 25 Years," *The New England Journal of Medicine*, 353: 1171-1176.

Lawton, M. Powell, Miriam Moss & Morton H. Kleban, 1984 "Marital status, living arrangements, and the well-being of older people" *Research on Aging* 6(3):323-345.

Wang, Yuesheng, 2012 "Study on intergenerational relationship in old age supporting of urban and rural China" *Open Times* 2: 102-121.

Zhang, Yi, 2013 "Living arrangement, health and caring arrangement of the elderly in China" *Jiangsu Social Sciences* 1:57-65.

Williams, K., & Umberson, D. 2004 . Marital status, marital transitions, and health: a gendered life course perspective. *Journal of Health and Social Behavior*, 45, 81-91.

Rahman, Menken, & Kung, 2004. The impact of family member on the self-report health of order men and women in rural areas of Bangladesh. *Aging ans Society*, 24, 903-920.

You, K.S., & Lee, H. (2006). The physical, mental, and emotional health of older people who are living alone or with relatives. *Archives of Psychiatric Nursing*, 20, 193–201.

LU Jie-hua A,BAI Ming-wen B,LIU Yu-zhi.2008. The study of the preference of the living arrangements of the elders, *Population Journal*. 167, 35-41.

Guihua xie, 2009, Living arrangement of the Elderly and Children's caregiving Behaviors.*Chinese Journal of Sociology*. 29, 149-227.

Bian, F., J.R. Logan, and Y. Bian. 1998. Intergenerational Relations in Urban China: Proximity, Contact and Help to Parents. *Demography* 35:115–24.

LU Jie-hua A,BAI Ming-wen B,LIU Yu-zhi. 2008. The study of the preference of the living arrangement for the urban elders. *Population Journal*.

Zeng Yi, Wang Zhenglian.. 2004. Family and changes of living arrangement of the elderly in China. *Chinese Journal of Population Science* 5: 2-8.

Litwak, 1960. Geographic mobility and extended family cohesion. *American Sociological Review* 25: 385-394.

Minzhi Ye & Yiwei Chen. 2013. The influence of domestic living arrangement and neighborhood identity on mental health among urban Chinese elders. *Aging and Mental Health*. Vol.18, No.1,40-50.

Lee, G.R.,&DWyer, A.(2007). Widowhood, gender, and depression. *Research on Aging and Health*, 23(6),933-953.

Table 1 Sociodemograohic and health characteristics of the sample

	Total	Gender		Living places		Marital status	
	(n=4115)	Female (n=1,996)	Male (n=2,119)	Rural （n=2,179）	Urban (n=1,936)	Not having a living sposue (n=1,211)	Having a living spouse (n= 2,904)
Age group							
65-70(%)	39.61	39.43	40.73	43.41	35.33	24.19	46.04
70-75(%)	28.97	28.41	29.5	28.41	29.6	25.02	30.61
75-80(%)	19.32	18.84	19.77	17.85	20.97	24.94	16.98
80 or above(%)	12.1	14.33	10.00	10.33	14.1	25.85	6.37
Year of schooling(range 0-19;mean SD)	3.18 (4.41)	1.95 (3.751)	4.34 (4.66)	2.00 (3.30)	4.51 (5.07)	1.77 (3.54)	3.77 (4.60)
Physical health(range 0–42; mean, SD)	3.32 (8.28）	4.06 (8.95)	2.62 （7.52）	3.89 (8.71)	2.67 (7.71)	5.11 (10.00)	2.57 (7.37)
Personal income/1000(range 0–160; mean, SD)	4.38 （8.67）	2.96 （6.32）	5.71 （10.23）	2.56 (5.30)	6.42 (10.97)	3.27 (6.63)	4.84 (9.35)
Financial aid from families and relatives/1000(0–140;mean,SD)	0.95 （3.68）	0.82 （2.64）	1.06 (4.43)	0.99 （3.82）	0.90 （3.51）	0.88 (2.86)	0.98 (3.97)
Number of children (range 1–10;mean,SD	3.38 （1.56）	3.52 (1.62)	3.26 (1.48)	3.64 （1.59）	3.10 （1.48）	3.44 (1.69)	3.36 (1.50)
Mental health (range 6-30;mean, SD)	9.46 （4.42）	10.04 (4.73)	8.92 (4.03)	10.29 （4.77）	8.52 （3.78）	10.06 (4.79)	9.21 (4.23)
Living arrangemet							
Living with children (%)	59.64	62.32	57.1	64.94	53.67	76.05	52.79
Same neighborhood/Next door or Same village/street(%)	22.14	20.74	23.45	23.73	20.35	13.46	25.76
Different village/street in the same county/district or Different district in the same city(%)	16.4	15.38	17.37	9.36	24.33	9.58	19.25
Different county in the same province or Different province or Outside of Mainland China(%)	1.82	1.55	2.08	1.97	1.65	0.91	2.2

	Model 1	Model 2
Table 2 Associations of living arrangement and mental health		
Male	-0.586***	-0.599***
	(0.125)	(0.125)
Age 70_75	0.0290	0.0422
	(0.157)	(0.157)
Age 75_80	-0.172	-0.146
	(0.195)	(0.196)
Age 80_	-1.047***	-1.034***
	(0.252)	(0.252)
Marriage status	-0.271	-0.210
	(0.169)	(0.172)
Year of schooling	-0.0983***	-0.0941***
	(0.0144)	(0.0146)
Urban	-1.165***	-1.136***
	(0.151)	(0.152)
Physical health	0.154***	0.152***
	(0.0120)	(0.0120)
Personal income	-0.0180**	-0.0171**
	(0.00569)	(0.00569)
Financial aid from families and relatives	0.0226	0.0235
	(0.0194)	(0.0193)
No.of children	0.127**	0.132**
	(0.0489)	(0.0495)
Living arrangement 2		-0.249
		(0.177)
Living arrangement 3		-0.353*
		(0.175)
Living arrangement 4		-0.131
Constant	10.09***	10.11***
	(0.248)	(0.249)
Observations	4,115	4,115
R-squared	0.153	0.154

*** $p<0.001$, ** $p<0.01$, * $p<0.05$

Living arrangement is a variable of four categories. "Living arrangement 1" refers to "Living with children"; "Living arrangement 2" refers to "Same neighborhood/Next door or Same village/street"; "Living arrangement 3" refers to "Different village/street in the same county/district or Different district in the same city" ; "Living arrangement 4" refers to "Different county in the same province or Different province or Outside of Mainland China"

Table 3   Sex differences in the association of living arrangement and mental health

	Full model	Male	female
male	-0.599***		
	(0.125)		
age70_75	0.0422	-0.0607	0.153
	(0.157)	(0.199)	(0.235)
age75_80	-0.146	-0.176	-0.143
	(0.196)	(0.244)	(0.291)
age80_	-1.034***	-0.660*	-1.396***
	(0.252)	(0.328)	(0.348)
Marriage status	-0.210	0.207	-0.531*
	(0.172)	(0.241)	(0.221)
Year of schooling	-0.0941***	-0.0932***	-0.100***
	(0.0146)	(0.0174)	(0.0240)
Urban	-1.136***	-1.148***	-1.168***
	(0.152)	(0.178)	(0.216)
Physical health	0.152***	0.119***	0.179***
	(0.0120)	(0.0167)	(0.0162)
Personal income	-0.0171**	-0.0214***	-0.00772
	(0.00569)	(0.00612)	(0.0134)
Financial aid from families and relatives	0.0235	0.0255	0.00936
	(0.0193)	(0.0210)	(0.0421)
No.of children	0.132**	0.127*	0.135*
	(0.0495)	(0.0622)	(0.0662)
Living arrangement 2	-0.249	-0.485*	0.0421
	(0.177)	(0.199)	(0.260)
Living arrangement 3	-0.353*	-0.500*	-0.182
	(0.175)	(0.197)	(0.259)
Living arrangement 4	-0.131	-0.967*	1.020
	(0.437)	(0.450)	(0.783)
Constant	10.11***	9.391***	10.11***
	(0.249)	(0.329)	(0.341)
Observations	4,115	2,119	1,996
R-squared	0.154	0.129	0.159

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Living arrangement is a variable of four categories. "Living arrangement 1" refers to "Living with children"; "Living arrangement 2" refers to "Same neighborhood/Next door or Same village/street"; "Living arrangement 3" refers to"Different village/street in the same county/district or Different district in the same city" ; "Living arrangement 4" refers to "Different county in the same province or Different province or Outside of Mainland China"

Table 4 Differences of associations of living arrangement and mental health between urban and rural areas

	Full model	Urban	Rural
Male	-0.599***	-0.607***	-0.566**
	(0.125)	(0.155)	(0.198)
Age70_75	0.0422	0.0914	-0.0626
	(0.157)	(0.202)	(0.235)
Age75_80	-0.146	-0.304	-0.0567
	(0.196)	(0.240)	(0.305)
Age80_	-1.034***	-0.799*	-1.342***
	(0.252)	(0.313)	(0.399)
Marriage status	-0.210	-0.366	-0.0515
	(0.172)	(0.224)	(0.256)
Year of schooling	-0.0941***	-0.0852***	-0.105***
	(0.0146)	(0.0161)	(0.0297)
Urban	-1.136***		
	(0.152)		
Physical health	0.152***	0.118***	0.174***
	(0.0120)	(0.0162)	(0.0166)
Personal income	-0.0171**	-0.00549	-0.0653***
	(0.00569)	(0.00606)	(0.0131)
Financial aid from families and relatives	0.0235	0.0466	0.0253
	(0.0193)	(0.0317)	(0.0225)
No.of children	0.132**	0.228***	0.0690
	(0.0495)	(0.0661)	(0.0714)
Living arrangement 2	-0.249	-0.271	-0.145
	(0.177)	(0.243)	(0.249)
Living arrangement 3	-0.353*	-0.392	-0.277
	(0.175)	(0.206)	(0.324)
Living arrangement 4	-0.131	0.277	-0.467
	(0.437)	(0.649)	(0.597)
Constant	10.11***	8.741***	10.29***
	(0.249)	(0.284)	(0.355)
Observations	4,115	1,936	2,179
R-squared	0.154	0.119	0.129

*** $p<0.001$, ** $p<0.01$, * $p<0.05$

   Living arrangement is a variable of four categories. "Living arrangement 1" refers to "Living with children"; "Living arrangement 2" refers to "Same neighborhood/Next door or Same village/street"; "Living arrangement 3" refers to"Different village/street in the same county/district or Different district in the same city" ; "Living arrangement 4" refers to "Different county in the same province or Different province or Outside of Mainland China

Table 5 Differences of associations of living arrangement and mental health between different marital status

	Full model	Having a living spouse	Not having a living spouse
Male	-0.599***	-0.429**	-1.147***
	(0.125)	(0.137)	(0.278)
Age70_75	0.0422	-0.117	0.568
	(0.157)	(0.174)	(0.363)
Age75_80	-0.146	-0.0963	-0.182
	(0.196)	(0.235)	(0.354)
Age80_	-1.034***	-0.725*	-1.066**
	(0.252)	(0.369)	(0.363)
Marriage status	-0.210		
	(0.172)		
Year of schooling	-0.0941***	-0.0932***	-0.0937**
	(0.0146)	(0.0161)	(0.0334)
Urban	-1.136***	-1.149***	-1.193***
	(0.152)	(0.182)	(0.275)
Physical health	0.152***	0.164***	0.138***
	(0.0120)	(0.0162)	(0.0173)
Personal income	-0.0171**	-0.0207***	-0.00177
	(0.00569)	(0.00584)	(0.0177)
Financial aid from families and relatives	0.0235	0.0154	0.0452
	(0.0193)	(0.0200)	(0.0486)
No.of children	0.132**	0.150*	0.0775
	(0.0495)	(0.0636)	(0.0787)
Living arrangement 2	-0.249	-0.444*	0.456
	(0.177)	(0.201)	(0.376)
Living arrangement 3	-0.353*	-0.507**	0.187
	(0.175)	(0.192)	(0.427)
Living arrangement 4	-0.131	-0.214	0.288
	(0.437)	(0.487)	(0.844)
Constant	10.11***	9.836***	10.23***
	(0.249)	(0.285)	(0.403)
Observations	4,115	2,904	1,211
R-squared	0.154	0.163	0.132

*** $p<0.001$, ** $p<0.01$, * $p<0.05$

Living arrangement is a variable of four categories. "Living arrangement 1" refers to "Living with children"; "Living arrangement 2" refers to "Same neighborhood/Next door or Same village/street"; "Living arrangement 3" refers to"Different village/street in the same county/district or Different district in the same city" ; "Living arrangement 4" refers to "Different county in the same province or Different province or Outside of Mainland China"