

# Gender Differences in Activity of Daily Living of the Elderly in Rural China: Evidence from Chaohu

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**ABSTRACT.** Using data from a sample survey, “Well-being of the elderly in Anhui province, China,” this paper studies the effects of health, economic and family factors on the activities of daily living (ADLs) as measures of disability for elderly men and women. The objective is to explore reasons for gender differences in ADLs in rural China. Our results suggest that higher incidence rates of chronic diseases, lower cognitive ability, as well as heavier household and daily care burdens of females, are the main factors leading to a higher prevalence of ADL disability for the female elderly. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]

**KEYWORDS.** ADL, gender difference, intergenerational support, rural Chinese elderly

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### **BACKGROUND**

Activity of daily living (ADL) is the ability to conduct routine activities of daily living, such as eating, bathing, dressing, toileting, and transferring. Many studies have used tasks related to ADLs to study physical disability in the elderly (Martin, Meltzer, & Eliot, 1988; Ward, Hubert, Shi, & Bloch, 1995), which is the most common problem affecting health and quality of life, and results in dependency and institutionalization (Fried, Ettinger, Lind, Newman, & Gardin, 1994).

Many studies on functional disability, mostly carried out in Western countries, have found that the prevalence of disability related to ADLs not only increases with aging (Martin et al., 1988; Ward et al., 1995), but also shows an association with gender (Dunlop, Hughes, & Manheim, 1997). Women have a greater prevalence of disability problems related to personal care activities (Penning & Strain, 1994) in both developed and developing countries (Lamb, Myers, & Andrewa, 1994). However, some studies have also found that gender is not always a significant variable when sociodemographic and other variables are included in multivariate treatments (e.g., Guralink & Kaplan, 1989; R. G. Rogers, A. Rogers, & Belanger, 1992).

Previous studies in China have found gender differences in ADLs of the elderly, and that the prevalence of ADL-related disability is higher for women than for men. While a great deal of research has addressed gender differences and their underlying causes in ADLs of the elderly in Western countries, there have not yet been detailed studies in China. In the context of the socioeconomic and cultural background of rural Chinese society, can differences in individual health, economic and family variables explain gender differences in ADLs for the elderly? Using data from a sample survey, this paper analyzes gender differences in the ADL disability as well as the underlying health, economic, and family factors in rural China that produce these differences.

### **LITERATURE REVIEW**

Studies in developed countries have shown that gender does exert an indirect effect on ADL disability in older adults, and the relationship of gender to ADL disability is largely explained by disease and social covariates (Wray & Blaum, 2001). Among factors causing decline in ADLs, the most important are various chronic diseases (Kaplan & Strawbridge, 1994). A study in Egypt found that an increase in the num-

ber of living children of the elderly may significantly increase their likelihood of functional disability (Lamb, 1996). Moritz, Kasl, and Berkman (1995) found that social isolation and lack of participation in social activities were associated with limitations in ADLs. The receipt of tangible support did not, however, have a uniformly beneficial effect on functional status. In fact, a greater frequency of instrumental support was associated with increased risk of subsequent disability among older men (Seeman, Bruce, & McAvay, 1996).

Studies in China indicated that with increasing age, cognitive disability gradually replaces chronic diseases as the main cause of the decline in ADLs (Song & Chen, 2001), and dependence on economic help from children and relatives reduces ADLs (Chu, 2001). Tang and Xiang (2001) found that functional status was associated with gender and marital status.

Men and women have different health and disability outcomes. Reproductive, hormonal, and other physiological differences result in different health risks. Additionally, work, family, and life style roles are not the same for women and men (Lamb, 1996). The access to medical care is more limited for women than men, and women experience more pressure as well as the additional health risk from childbearing in developing countries (Zhu & Jiang, 1991). Traditionally, Chinese women were supposed to marry and start childbearing at an early age. This was particularly true for women in rural areas until the implementation of the state-guided family planning policy and new marriage regulations in the 1970s, which increased the age at first marriage and caused the fertility rate to decline sharply. Gallagher (1990) found that in Egypt early and high parity childbearing may lead to health problems for women in later life, especially if women have had little or no access to trained medical personnel. Women are traditional household workers and family care providers. They not only work outside with men but also take care of family members, and the average working hours per day for women is longer than that for men (Li, 2002). This heavy work burden further impairs the health of women.

The traditional gender inequality still persists in various forms in China (Honig & Hershatter, 1988; Li, Zhu, & Feldman, 2004), particularly in rural areas (Zhu & Jiang, 1991). The proportion of the male elderly covered by the pension system is higher than of the female elderly (Li, 2002). Consequently, the number and degree of need of female elderly depending on family support are greater than those of male elderly (Chen, 2003; Li, Feldman, & Jin, 2004). The female elderly have less

access to and control over family financial resources than male elderly (Zhu & Jiang, 1991). This is especially true in rural China.

The family is the predominant care provider of the disabled rural elderly, and virtually all elders in need rely on children and relatives for instrumental assistance and personal care (Ikels, 1997; Wu, 1991). An elucidation of factors affecting gender difference in the ADLs of the elderly may provide a reference base for community-based intervention programs that aim to improve the health and quality of life for the elderly, especially elderly women.

## **RESEARCH DESIGN**

### ***Data***

Data in this study come from a sample survey "Well-being of the elderly in Anhui province, China," conducted in Chaohu city of Anhui province by the Institute for Population and Development Studies of Xi'an Jiaotong University in April 2001. Chaohu city lies on the north bank of Yangtze River, in the central part of Anhui province.

The survey includes assessments of family relations, physical health status, and psychological well-being, etc. The targets of the sample survey were people aged 60 and above in the rural areas of Chaohu city. Stratified multiple-stage sampling was adopted to randomly select 1,800 respondents. As last, 1,690 completed valid questionnaires were finished, including 825 (48.8 percent) men and 865 (51.2 percent) women. Among responders with valid questionnaires, 38.8 percent were aged 75 and above, with men accounting for 39.5 percent of these.

### ***Method***

As women and men have different work, family, and household roles, as well as different health risks, it is reasonable to assume that there are different correlates with disability for elderly men and women. Therefore, it is important to adopt separate gender-specific causal models when studying health and ADL disability. Logistic regression models are used to estimate effects of individual factors on old people's likelihood of having difficulty in performing ADLs for men and women, respectively. Variables used in the logistic regression models are described below.

### ***Dependent Variable***

The ADL was measured by a 6-item Katz scale (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963), including bathing, eating, getting out of bed or chair, dressing or undressing, moving about the house, using the toilet. The dichotomous dependent variable indicates problems in performing at least one of 6 activities of daily living. The reliability of internal consistency for this measure estimated by the Cronbach's alpha was about 0.92. The ADL status of the elderly by age group in our sample is described in Table 1.

### ***Independent Variables***

The independent variables include old people's age, chronic disease status, cognitive ability, economic status and family background. Statistical information about the independent variables is provided in Table 1. The measurement of these variables is described below.

#### *Chronic Diseases*

As physiological functions deteriorate, the elderly usually suffer from various kinds of diseases, especially chronic diseases. Among them, stroke, cancer or malignant tumor, cataracts or glaucoma are the 3 most common serious diseases that have major effects on ADL of the elderly in rural China (Tao, 2001). Eleven kinds of specific chronic diseases were included in the survey questionnaire, and they were measured in 4 categories: *yes*, *no*, *refused to answer*, *don't know*. All of the 11 chronic diseases were included and are treated as categorical variables in the regression model.

Restricted by relatively poor economic status and local medical conditions, most of the elderly in rural Chaohu are unlikely to see a doctor when they do not feel well. As a result some respondents could not give a definite answer although they were not in good health or may have had some diseases. This study used a conservative measure to only include those who reported specific diseases in the survey. Answers as "*refused to answer*" and "*do not know*" were grouped into the category "*no*." The actual incidence rates of all kinds of diseases were likely to be higher than those reported.

#### *Cognitive Ability*

Cognitive ability is correlated with occupation, educational attainment and physical health status. Cognitive ability was assessed by 6

TABLE 1. Statistical information for variables in the models.

Variable	Men		Women	
	Mean	SD	Mean	SD
<b>ADL disability by age group</b>				
60-64	0.11	0.31	0.20	0.40
65-69	0.16	0.37	0.20	0.40
70-74	0.23	0.42	0.37	0.48
75-79	0.31	0.46	0.40	0.49
80-84	0.40	0.49	0.64	0.48
85-89	0.68	0.48	0.70	0.46
90+	0.50	0.58	0.80	0.45
<b>Age</b>	70.14	6.98	72.75	7.53
<b>Chronic diseases</b>				
Have high blood pressure	0.23	0.42	0.25	0.43
Have diabetes	0.01	0.10	0.02	0.14
Have heart disease	0.11	0.32	0.19	0.39
Have stroke	0.03	0.16	0.02	0.14
Have cataracts or glaucoma	0.18	0.39	0.28	0.45
Have cancer or malignant tumor	0.01	0.12	0.01	0.10
Have bronchitis or other respiratory ailment	0.25	0.44	0.19	0.40
Have arthritis or rheumatism	0.38	0.49	0.45	0.50
Have gastric ulcer or other stomach ailment	0.18	0.38	0.22	0.42
Have osteoporosis (weak bones)	0.13	0.34	0.20	0.40
Have liver or gall bladder disease	0.02	0.13	0.02	0.12
<b>Cognitive ability</b>	8.29	2.69	6.44	2.77
<b>Economic status</b>				
Occupation: <i>agricultural work</i>				
Non-agricultural work	0.08	0.26	0.03	0.16
Others	0.01	0.12	0.08	0.28
<b>Family variables</b>				
Number of children	3.83	1.80	3.92	1.65
Marital status: <i>currently married</i>				
Widowed, divorced or never married	0.32	0.47	0.57	0.50
Living arrangements: <i>living alone or with spouse</i>				
In skip-generational household	0.18	0.39	0.16	0.36
Living with children	0.29	0.46	0.36	0.48
Living with others	0.02	0.13	0.01	0.10
Intergenerational transfer				
Receiving instrumental support from children	0.36	0.48	0.52	0.50
Providing instrumental support to children	0.30	0.46	0.40	0.49
Receiving financial support from children	0.92	0.28	0.97	0.18
Providing financial support to children	0.47	0.50	0.34	0.48
Emotional support transfer	3.90	1.62	4.10	1.45
<b>Number of cases</b>	825		865	

Source: Survey of "Well-being of the elderly in Anhui province" conducted in Chaohu city, 2001.

Note: Diseases, occupation, marital status, living arrangements, instrumental and financial transfers are category variables. Others are numerical variables. The reference categories of categorical variables are: *no diseases, agricultural work, currently married, living alone or with spouse, not receiving support, not providing support.*

items in the questionnaire, including *general ability*, *response ability*, *attentive ability*, *calculative ability*, *retentive ability*, etc. The value of the cognitive ability variable is the sum of the scores of all 6 items in this measure, ranging from 0 to 12. A higher value of this measure reflects greater cognitive ability. Answers to these 6 items in this part of questionnaire may be influenced by any state of dementia that affects the respondent. Some dementia-like syndromes would not be distinguishable in this context from those of chronic diseases such as Alzheimer's disease. The reliability of the internal consistency for this measure estimated by Cronbach's alpha was about 0.90.

### *Economic Status*

Although a few of rural elderly who have been engaged in non-agricultural work are covered by a retirement pension system, most of them are not secured by any fixed income plan, and they depend primarily on their children and/or on their own savings for economic support in their old age (Martin, 1988). The predominant occupation that an elderly person has been engaged in is an important indicator of his/her economic status; it not only indicates the possible pension income, but also suggests that variation exists in the extent of social resources available for emergent financial need. Occupation was constructed as a categorical variable, including 3 categories of *agricultural work*, *non-agricultural work*, and *other occupations*, such as doing housework.

### *Family Variables*

Variables describing the family background of the elderly include number of surviving children, marital status, living arrangement, and intergenerational transfers. Marital status was constructed as a categorical variable, including 2 categories of *currently married*, *widowed/divorced/never married*. Living arrangement was divided into 4 categories of *living alone or with spouse*, *living with grandchildren in skip-generational household*, *living with children*, and *living with other relative/non-relatives*. Intergenerational transfer includes of instrumental, financial and emotional transfers. Instrumental and financial transfers were defined by 4 dichotomous variables, denoting whether or not the elderly received or provided support in the last 12 months before the survey. Emotional transfer was measured by a composite variable constructed from 3 questions asking respondents to evaluate their relationship with each of their adult children along the following dimensions:

*feeling close to that child, being on good terms with that child, and whether that child listen to your problems.* Each of these questions had 3 possible answers. The answers to these 3 items were added to form a scale ranging from 0-6. A higher value of this measure reflects a closer relationship between generations. The reliability of the internal consistency for this measure estimated by the Cronbach's alpha was about 0.86 in the survey.

## **RESULTS AND DISCUSSION**

### ***Descriptive Information***

Table 1 shows the number and percentage of the elderly having ADL disability by gender and age group. It is seen that the proportion of the elderly having ADL disability is much higher for women than for men, with the former about 37 percent and the latter about 22 percent. This trend remains across all age groups.

Table 1 presents statistical information about independent variables used in the statistical models. It is apparent that, as with ADL disability, older men and women also differ greatly in terms of their age, health status, economic status and family background. The female elderly were relatively older than the males, which is consistent with life expectancy at birth usually being higher for women than for men. Among the 11 kinds of chronic diseases, 7, namely arthritis or rheumatism, high blood pressure, cataracts or glaucoma, bronchitis or other respiratory ailment, gastric ulcer or other stomach ailment, osteoporosis and heart disease, were more prevalent than the other 4 diseases. It is also found that of these 7, all except bronchitis or other respiratory ailment were more prevalent in the female elderly than in the male elderly. Generally speaking, the morbidity of the elderly women is higher than that of the elderly men. Cognitive ability for the male elderly was higher than that for the female elderly.

More than 90 percent of the respondents were or had been engaged in agricultural jobs. Most of the respondents with a non-agricultural job were government workers, rural clinic doctors, or businessmen. Those with a non-agricultural job were mostly men.

More than half (about 57%) of the female respondents are widowed or divorced, and the proportion of women currently married was lower than that of men, a fact related to men's relatively shorter life expectancy at birth. Most of the elderly were living alone or with a spouse,



and the proportion of men in this living arrangement was higher than that of women. The percentage of elderly women living with children was higher than that of elderly men, in agreement with the preference reported by Spitze and Logan (1990). About 16 percent of the women and 18 percent of men were living with grandchildren in skip-generational households.

Compared to male elderly, female elderly were more likely to provide and receive instrumental support, which may be related to their health status and care provider roles in the family. More than 90 percent of the elderly had received financial support from children and less than 50 percent of them had provided financial help to their offspring, indicating that the economic status of the elderly was worse than that of children. Compared with female elderly, the male elderly were less likely to receive and more likely to provide financial support to the children, possibly because the economic status of older men is better than that of older women. On average, elderly women feel much closer to their children than do elderly men.

In short, ADL disability differs greatly between elderly men and women, as do their individual health, economic and family background. Multivariate regression models may reveal different correlates of ADL disability for men and women, respectively.

### *Regression Results*

The results of logistic regression analysis of occurrence of ADL disability are shown in Table 2. Most of the independent variables have significant influences on the ADLs of the elderly, and the effects of these variables differ between men and women. The influence of each variable is discussed below.

### *Age*

Table 2 indicates that the odds of ADL disability increase with age, and the aging process has a more deleterious effect on the functional status of men than women.

### *Chronic Diseases*

Chronic diseases are the main factors leading to the ADL-related disabilities in the elderly. From Table 2, the chronic diseases (ordered by

TABLE 2. Effects of independent variables on the odds of ADL disability for the elderly.

Variable	Men	Women
<b>Age</b>	1.072***	1.065***
<b>Chronic diseases</b>		
Have high blood pressure	1.940**	1.249
Have diabetes	2.521	1.022
Have heart disease	3.452***	2.127***
Have stroke	2.958	2.177
Have cataracts or glaucoma	1.946**	2.248***
Have cancer or malignant tumor	3.244	0.347
Have bronchitis or other respiratory ailment	1.215	1.530*
Have arthritis or rheumatism	1.476	2.233***
Have gastric ulcer or other stomach ailment	1.518	1.480
Have osteoporosis (weak bones)	3.341***	2.076***
Have liver or gall bladder disease	0.511	0.661
<b>Cognitive ability</b>	0.927*	0.865***
<b>Economic status</b>		
Occupation: <i>agricultural work</i>		
Non-agricultural work	1.905	1.053
Others	2.265	0.548
<b>Family variables</b>		
Number of children	0.942	0.932
Marital status: <i>currently married</i>		
Widowed, divorced or never married	0.778	0.883
Living arrangements: <i>living alone or with spouse</i>		
In skip-generational household	1.399	1.779*
Living with children	1.755*	1.476
Living with others	1.681	3.205
Intergenerational transfer		
Receiving instrumental support from children	0.563**	0.447***
Providing instrumental support to children	1.781*	1.887***
Receiving financial support from children	3.081*	0.653
Providing financial support to children	0.714	0.612*
Emotional support transfer	0.783**	0.960*
$\chi^2$	229.080***	290.199***
<b>Number of cases</b>	825	865

Note: Data source and omitted categories for categorical variables are the same with those in Table 1.  
 \*\*\*p < 0.001 \*\*p < 0.01 \*p < 0.05

the magnitude of the effects) that significantly affect the odds of ADL disability are heart disease, osteoporosis, cataracts or glaucoma, and high blood pressure for men, and cataracts or glaucoma, arthritis or rheumatism, heart disease, osteoporosis, and bronchitis or other respiratory ailment for women. Among these, while high blood pressure only has significant effects on males, bronchitis or other respiratory ailment and arthritis or rheumatism only have significant effects on females. However, osteoporosis, heart disease, and cataracts or glaucoma have significant effects on the odds of ADL disability for both men and female elderly, and the effects of the first two are relatively larger on men and those of the third are smaller on men. The higher incidence rates of chronic diseases, and the greater effects of most prevalent diseases such as bronchitis or other respiratory ailment, arthritis or rheumatism, cataracts or glaucoma on women, is a major cause of the higher odds of ADL disability for women.

### *Cognitive Ability*

Cognitive ability has considerable influence on the ADLs of the elderly, especially for women. Table 2 indicates that the higher the cognitive ability, the less likely that the ADLs are limiting or disabling. However, cognitive ability has a stronger impact on ADLs for women than for men. The cognitive impairment is strongly related to education, active social activity and intellectual activity (Niu & Xu, 2001). In the traditional Chinese family, men have more access to the education and are often in charge of the communicating with the outside world and making important decisions (Zhu & Jiang, 1991). In Table 1 we see that the cognitive ability of the women is lower than that of the men. Hence, women's lower cognitive ability, which is indirectly caused by the gender discrimination in the family, and its larger influence on ADL disability, are important factors leading to a higher prevalence of ADL disability for women.

### *Economic Status*

Table 2 demonstrates that the occupation of the elderly has no significant effect on the odds of ADL disability for the rural elderly. A plausible explanation is that most of the elderly have been or are engaged in agricultural work, and there was no great variation in their occupations.

### *Family Variables*

#### *Number of Children*

Lamb (1996) pointed out that “for women, the increased number of living children significantly increases the odds for functional disability,” because “early and high parity childbearing may lead to health problems for women in later life, especially if women have had little or no access to trained medical personnel, as is true in many rural areas.” Such reproductive effects of the number of children might be expected to produce a deleterious influence on the ADL disability of the old women. However, the coefficients in Table 2 indicate that number of children has no significant effect on the odds of ADL disability, which differs from the findings in Egypt (Lamb, 1996). A possible explanation is that any deleterious effect of children on the odds of ADL disability for elderly women in rural China has been ameliorated by intergenerational transfer effects. As the major component of the social network for Chinese elderly, the number of children is correlated with the likelihood and quantity of intergenerational transfer (Guo & Chen, 1998; Xu, 1996), and data in Table 1 show that elderly old women are more likely both to receive and provide intergenerational support.

#### *Marital Status*

Table 2 shows that marital status has no significant effects on the odds of ADL disability for both men and women. It is possible that marital status affects the ADLs of the rural elderly indirectly through intergenerational support, with children more likely to provide support to elderly parents without a spouse (Xu, 1996).

#### *Living Arrangements*

Men living with children have higher odds of ADL disability than those men in other living arrangements. A reasonable explanation is that the coresidence with children probably is the result of ADL disability; this is especially true in other East Asia areas (Hermalin, Ofstedal, & Chang, 1996). Table 2 shows that, women in skip-generational household have a higher risk of ADL disability. This is probably related to their roles in traditional families and the cause of the emergence of skip-generational household. Out-migration of the younger generation

is the direct reason for the presence of a skip-generational family, and grandparents are care-providers of the juvenile grandchildren (Zhang & Li, 2004). This places a burden on the elderly, especially women. Thus, the skip-generational household composition would increase the odds of ADL disability for old women, and contribute to the gender differences in ADLs.

### *Intergenerational Transfers*

Table 2 indicates that instrumental support from children significantly decreases the odds of ADL disability, and the extent of the effect is larger for the female elderly. Providing instrumental support to children has a significant negative influence on the ADLs of the elderly, with more deleterious effects on the female elderly. In Chinese families, household chores and daily care are carried out predominantly by women (Li, 2002), so instrumental support from children is more beneficial to elderly women while most of the instrumental support to the offspring was a burden on the female elderly.

Receiving financial support is significantly related to the odds of ADL disability for men. This is probably because the ADL disability of the men induced the financial support (Hermalin et al., 1996), and not because the support affected the ADLs. Almost all elderly women in rural areas receive financial support from children, but only 34 percent of them provide economic help to their offspring. We deduced that the economic status of those women donors was better than that of other elderly women; that is, they have more resources to maintain physical and psychological health.

For emotional transfer, Table 2 shows that intergenerational emotional closeness is beneficial to the ADLs of the elderly, with a greater effect on the functional status of men than on that of women. Western gerontological research has demonstrated that strong emotional closeness is associated with potential material support for the elderly, and the latter increases confidence and capability of coping with crisis (Thompson & Krause, 1998). Since rural Chinese elderly males are usually not skillful in household chores and daily care, the potential support resources are especially important for them. In summary, the above analyses of intergenerational transfers indicate that instrumental support is an important contributor to gender differences in ADLs, and is related to the roles of women in traditional family.

### **SUMMARY**

ADL disability is more common for female elderly than for male elderly, and is caused by many physiological and social factors. Chronic diseases, cognitive ability, and intergenerational transfers have significant influences on the ADLs of the elderly, and there are significant gender differences in the effects of those factors.

Chronic diseases are important factors for ADL disability of the elderly. The incidence rate of these diseases is higher for elderly women than men, and some of the most prevalent diseases among the elderly have stronger effects on ADL disability of elderly women. These diseases are predominant factors resulting in a higher odds ratio of ADL disability for women than for men.

The cognitive ability of women is lower than that of men, and the stronger effects of low cognitive ability on the odds of ADL disability for the female elderly contributes to the higher prevalence of ADL disability for women than for men. The gender differences in resources and social activity participation in traditional rural families are strongly related to the gender gap in cognitive ability, as reported by Wang and Zeng (2001).

The traditional role of care provider and household worker in the family has had important deleterious effects on the health status of the female elderly. In the skip-generational family, mostly caused by out-migration of adult children, elderly women are not only in charge of all the household work and part of the field work, but also take care of the juvenile grandchildren. The skip-generational living arrangement has negative effects on the ADLs of the female elderly, contributing to gender difference in ADL disability of the elderly.

Intergenerational transfer is strongly associated with the ADL disability. Of the intergenerational transfer behaviors, instrumental support exchange has the strongest influence on the ADLs, and the effects on the ADLs of elderly women are stronger than on the ADLs of elderly men, which is due to the traditional role of women in the family. It is reasonable that financial support from children is positively related to the odds ratio of ADL disability of men. Providing economic help to the children indicates that the elderly female has high economic status, which is known to be associated with better health status. High emotional closeness indicates potential intergenerational support in case of life crises, which is important for the male elderly, who are more vulnerable to crises than the female elderly. Male and female elderly are about equivalent and rather low in the strength of emotional closeness to the

children. However, this low strength of emotional closeness has stronger effects on the ADLs for males than for females, and has reduced the overall extent of gender difference in the ADLs.

Higher incidence rate of chronic diseases, lower cognitive ability, heavier household work and daily caregiving of the female elderly are the predominant factors that lead to a higher prevalence of their ADL disability. The gender gap in incidence rate of chronic diseases is not only due to natural physiological differences, but also to the reproductive behavior, material and medical care deficiencies. In rural area women are more likely to give other family members priority in enjoying good food and clothes (Sha, 1994). The resulting resource deficiency has more deleterious effects on the health status of women.

Gender difference in resource distribution and gender-based role partition is concomitant to gender discrimination under traditional Chinese norms. Gender differences in ADLs are expected to shrink with future long-term socioeconomic development and cultural change that has been the case in the Western developed countries.

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