Disparities in Activities of Daily Living Between Elderly Males and Females in China

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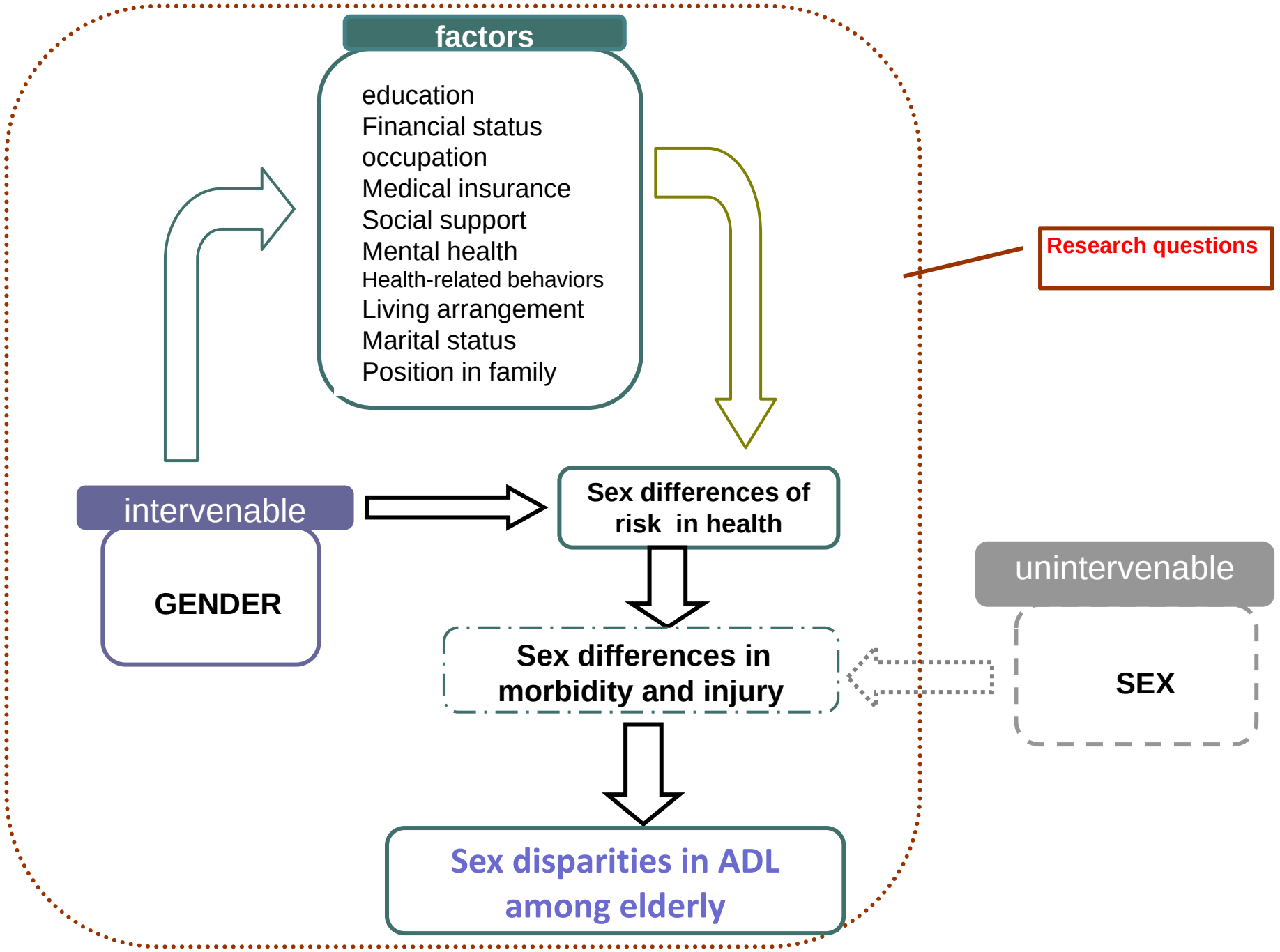
Research purpose

- Describe and identify the disparities in ADL between the elderly males and females
- Interpret the gender difference of ADL from a socioeconomic point of view


factors
education
Financial status
occupation
Medical insurance
Social support
Mental health
Health-related behaviors
Living arrangement
Marital status
Position in family
Research questions
intervenable
GENDER
Sex differences of risk in health
unintervenable
SEX
Sex differences in morbidity and injury
Sex disparities in ADL among elderly

About this study:

- Data source

  One-time sampling survey of the elderly living in rural and urban areas of China in 2006.

- Urban sample: 10016
- Rural sample: 9931

- Variables and measurement

The prevalence of BADL-disability：

The severity of BADL-disability：Minor-Moderate-Serious-Complete loss

SES indicators: education, marriage, self-perceived financial status, position in family, living arrangement, medical insurance…

- Method

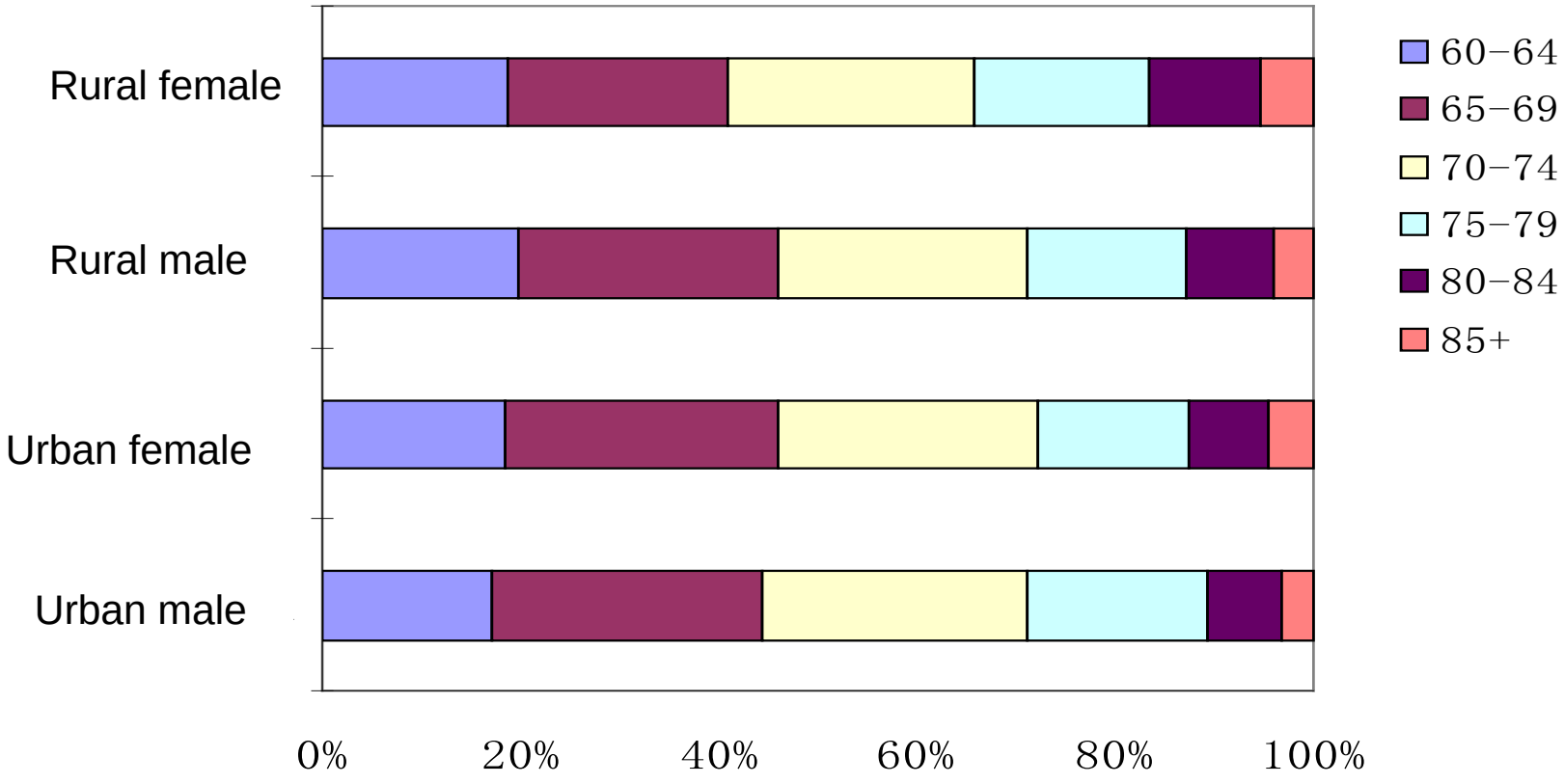
Age-standardization

Blinder-Oaxaca decomposition model

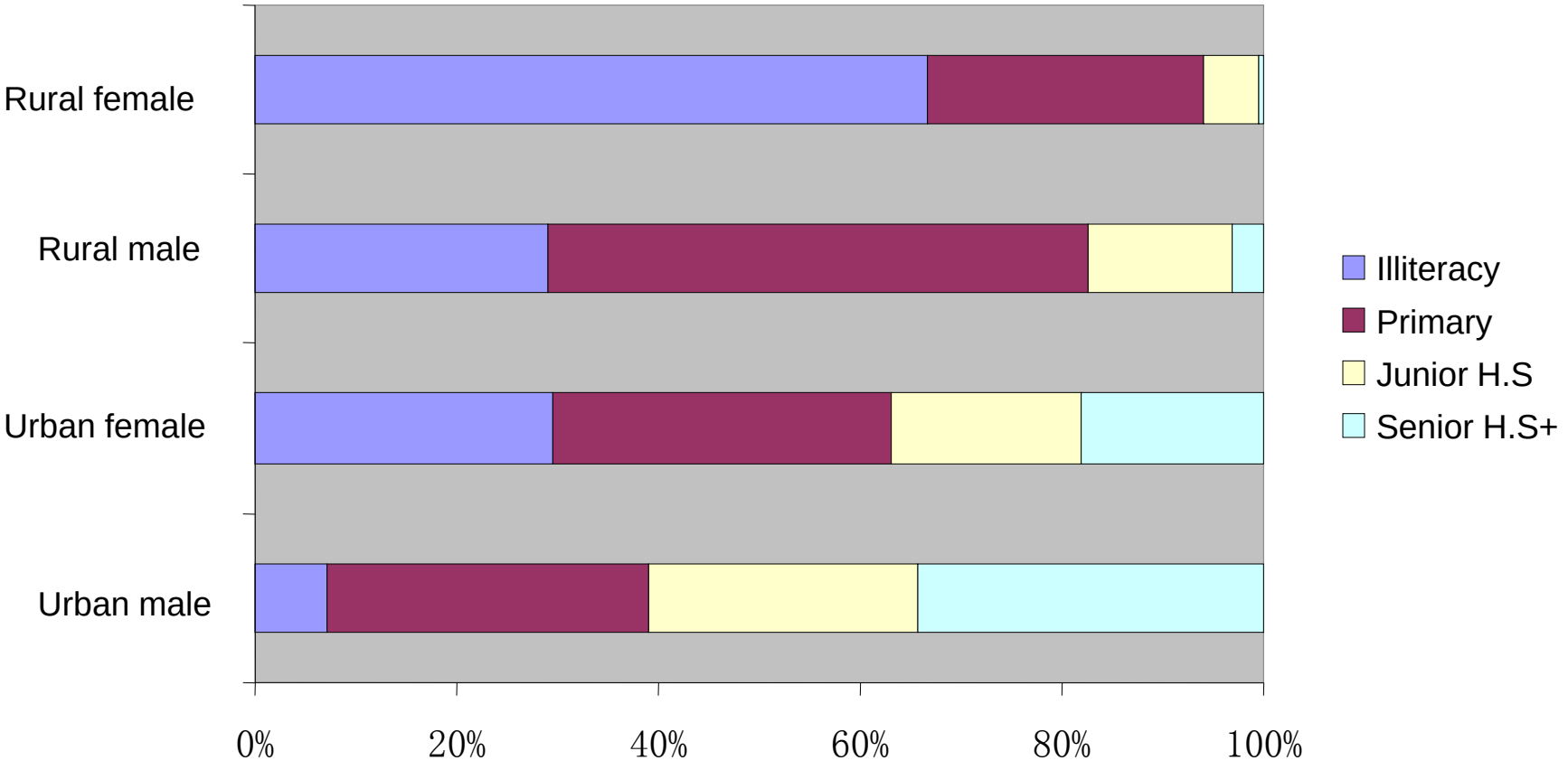
Sex-specific characteristics of the sample by:

- age
- Rural-urban
- Regional
- SES
- Each item of BADL

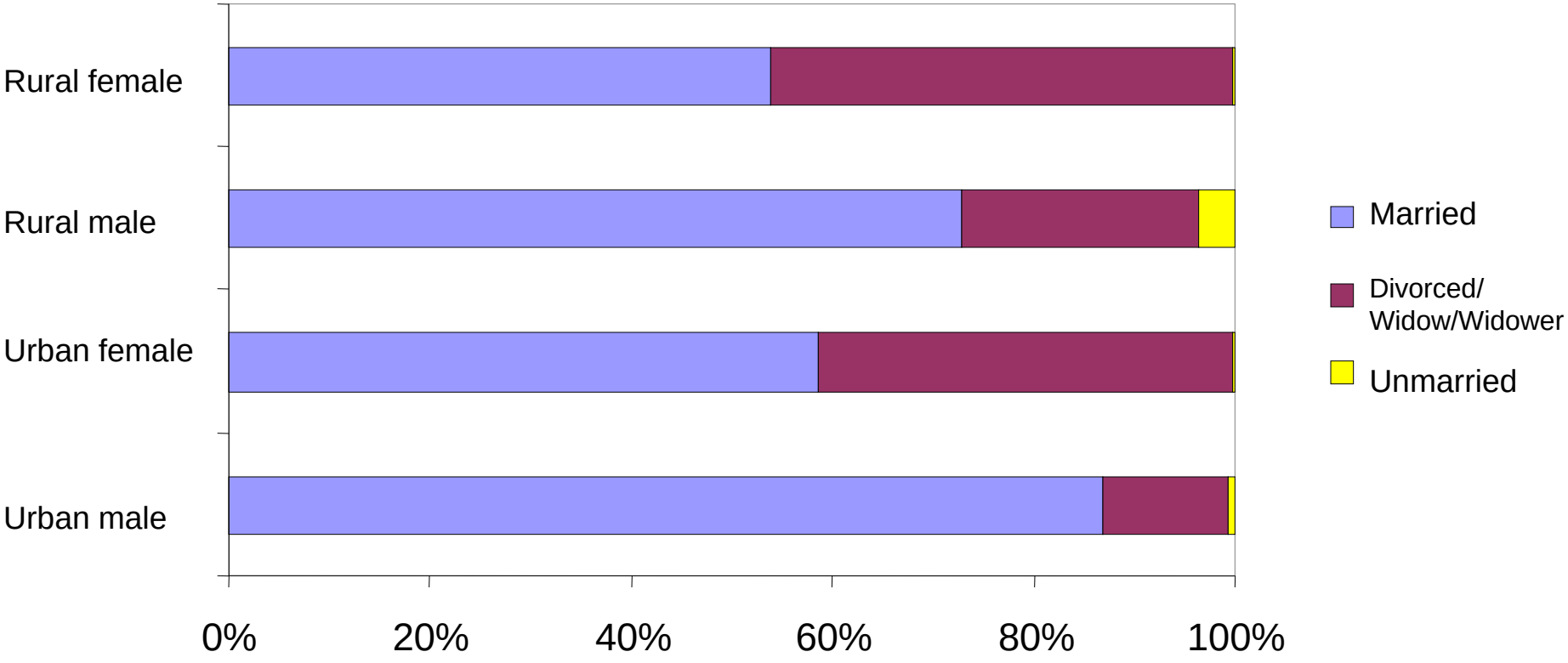
Age by sex and rural-urban



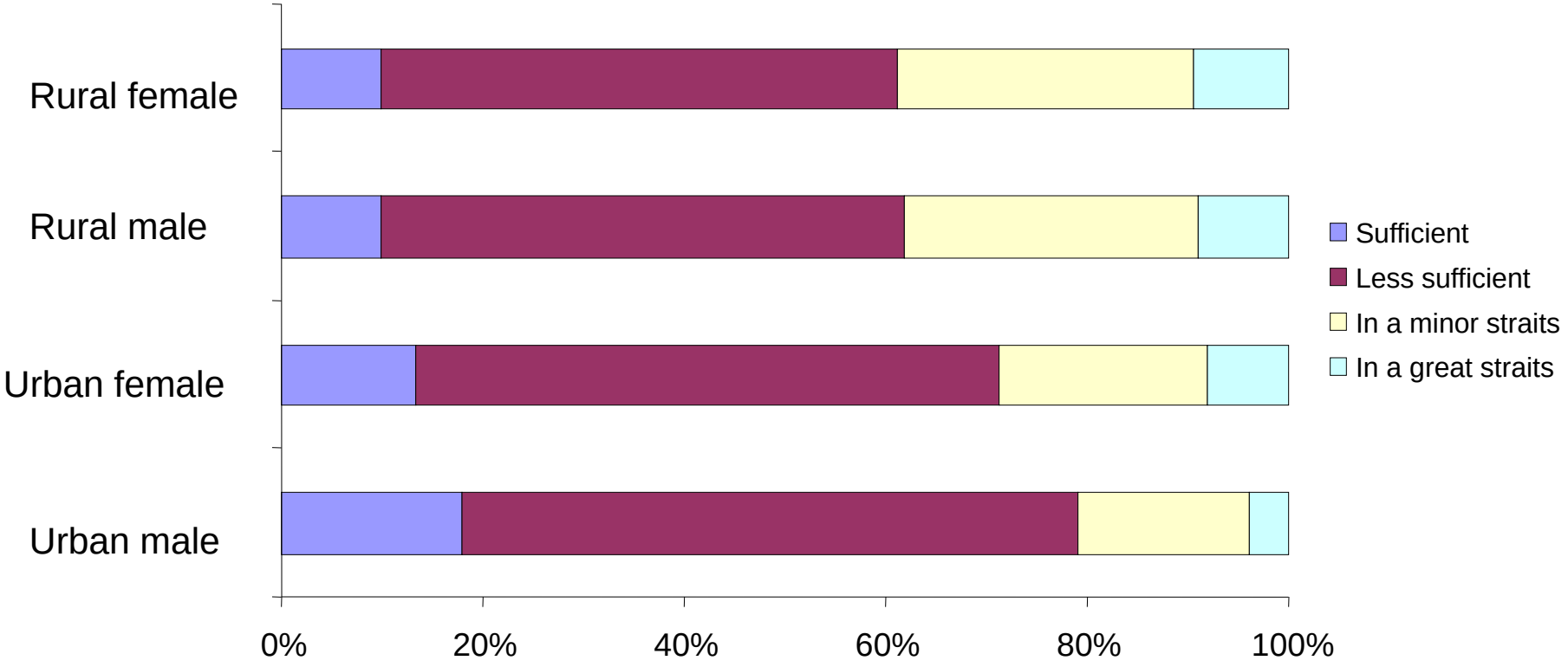
Education by sex and rural-urban



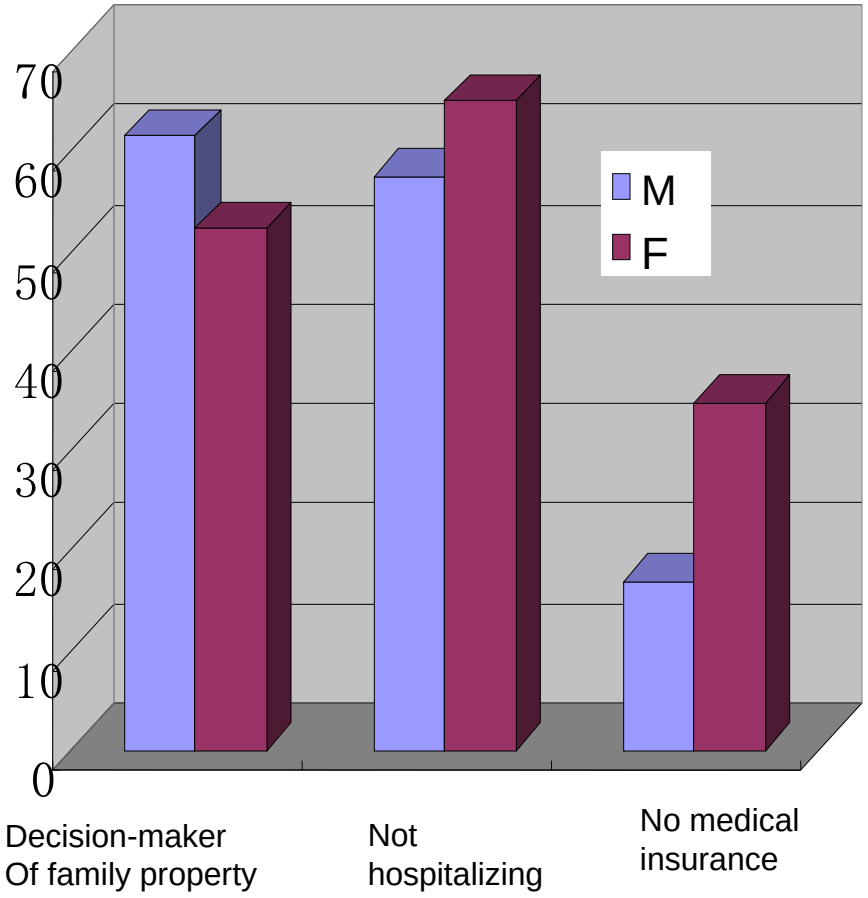
Marital status by sex and rural-urban



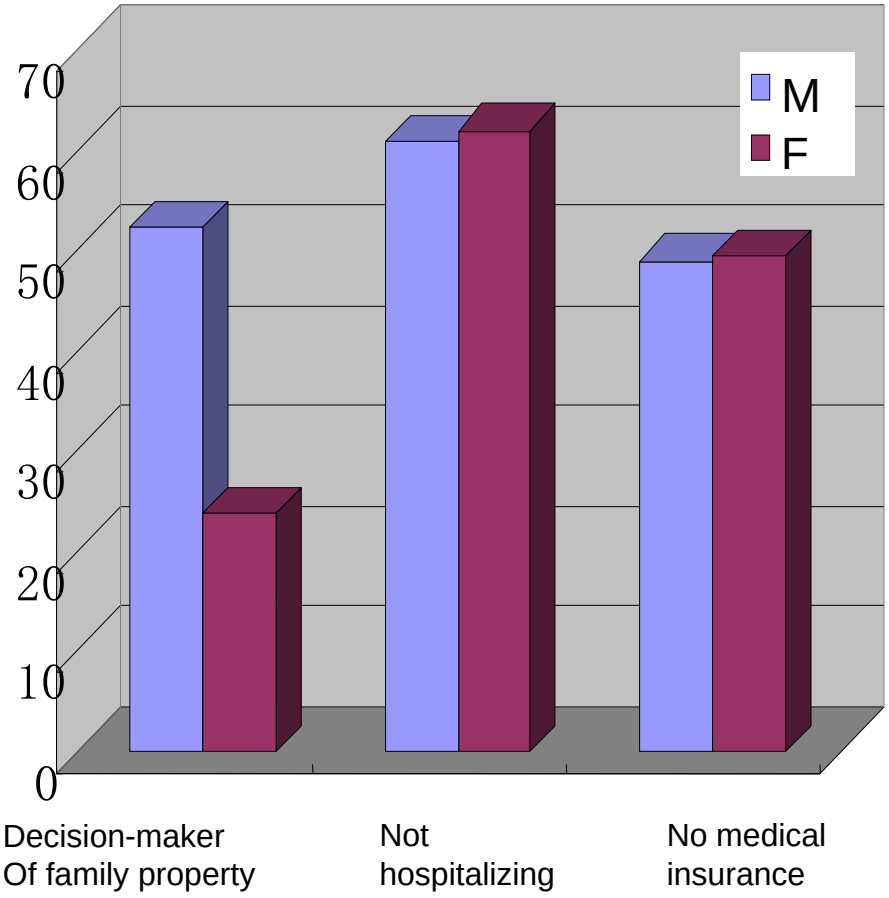
Self-perceived financial status by sex and rural-urban



The decision-maker of family property; Not hospitalizing due to lacking financial support; accessibility to medical insurance

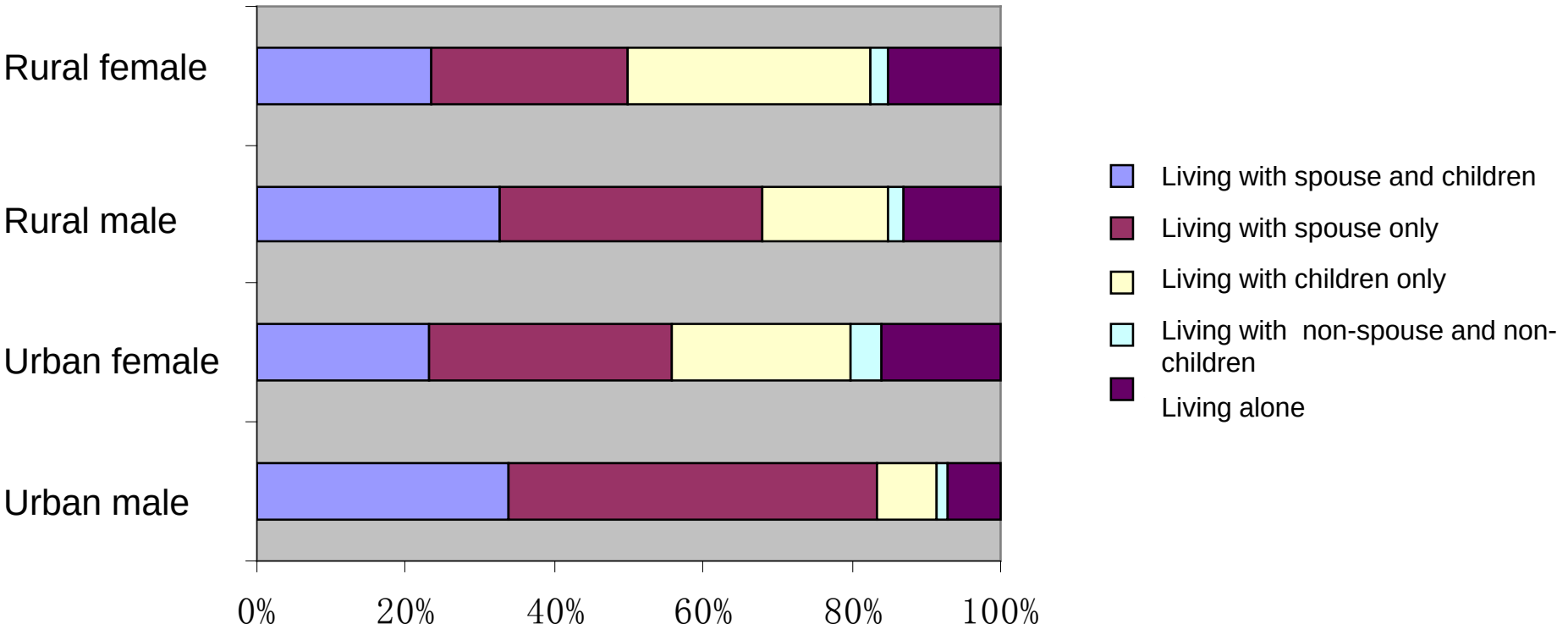


Urban

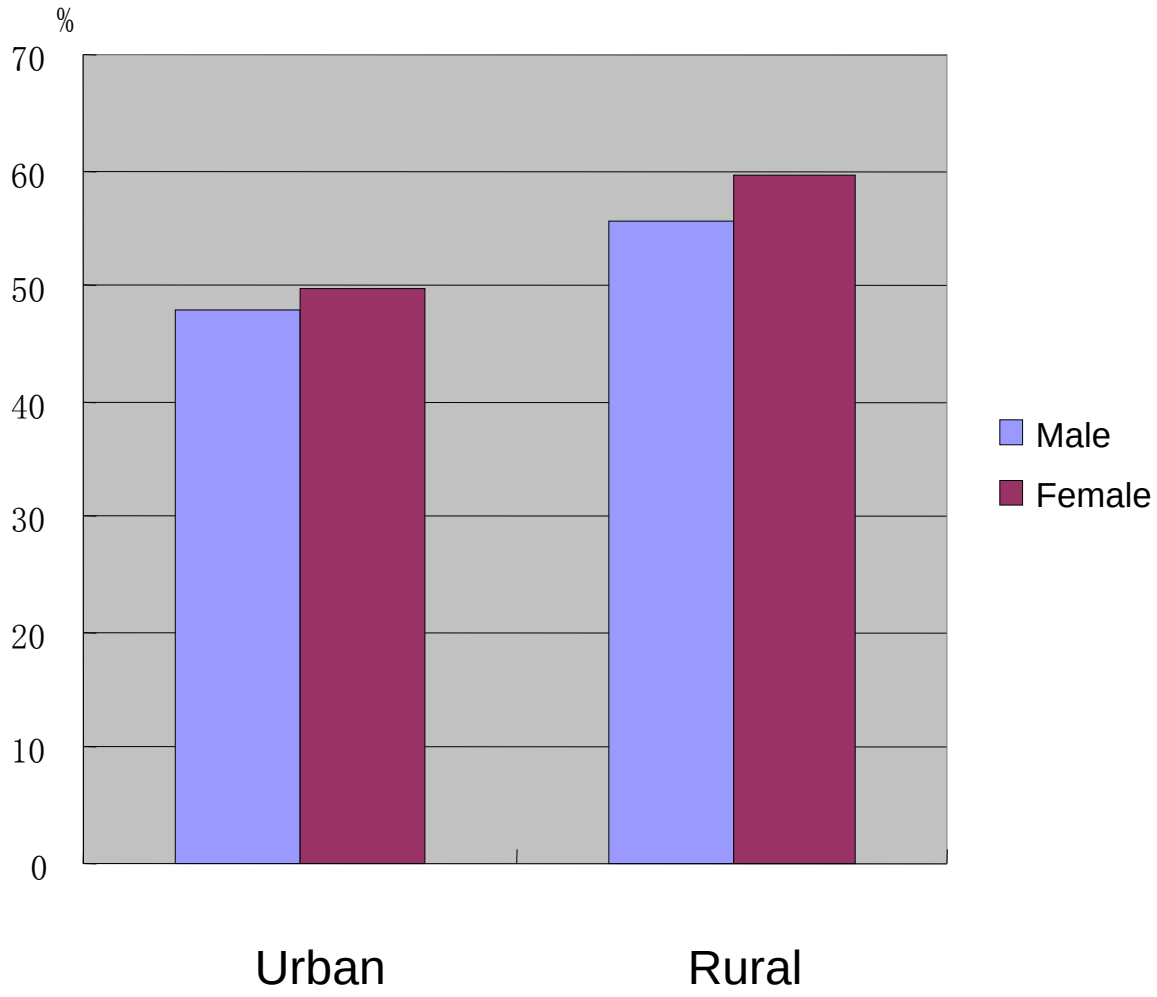


Rural

Living arrangement by sex and rural-urban



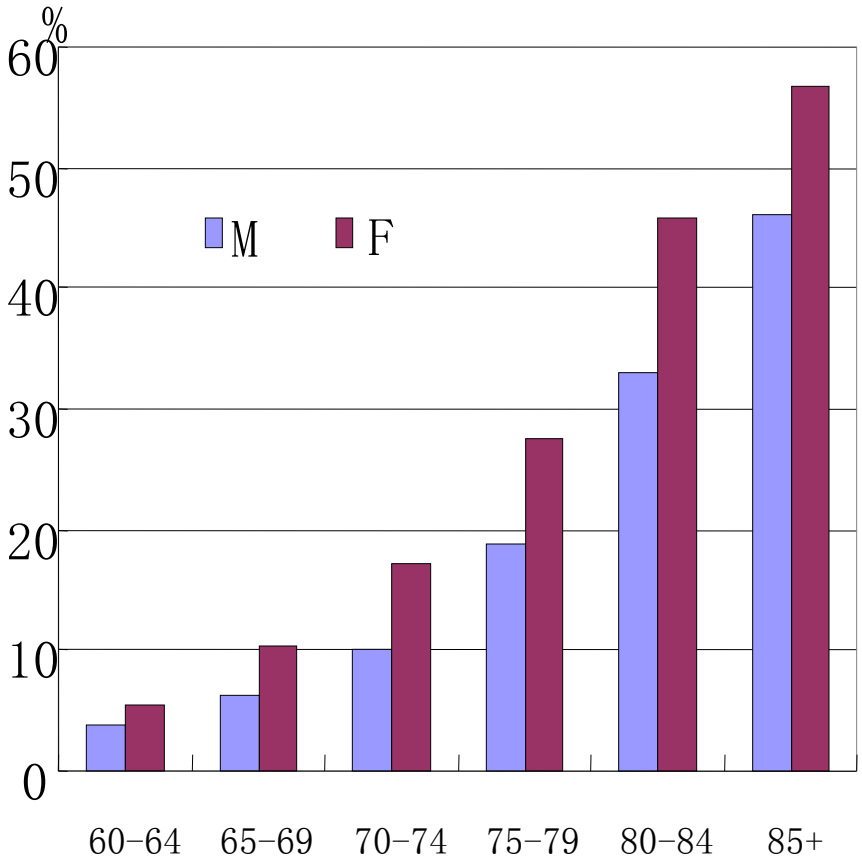
social isolation by sex and rural-urban



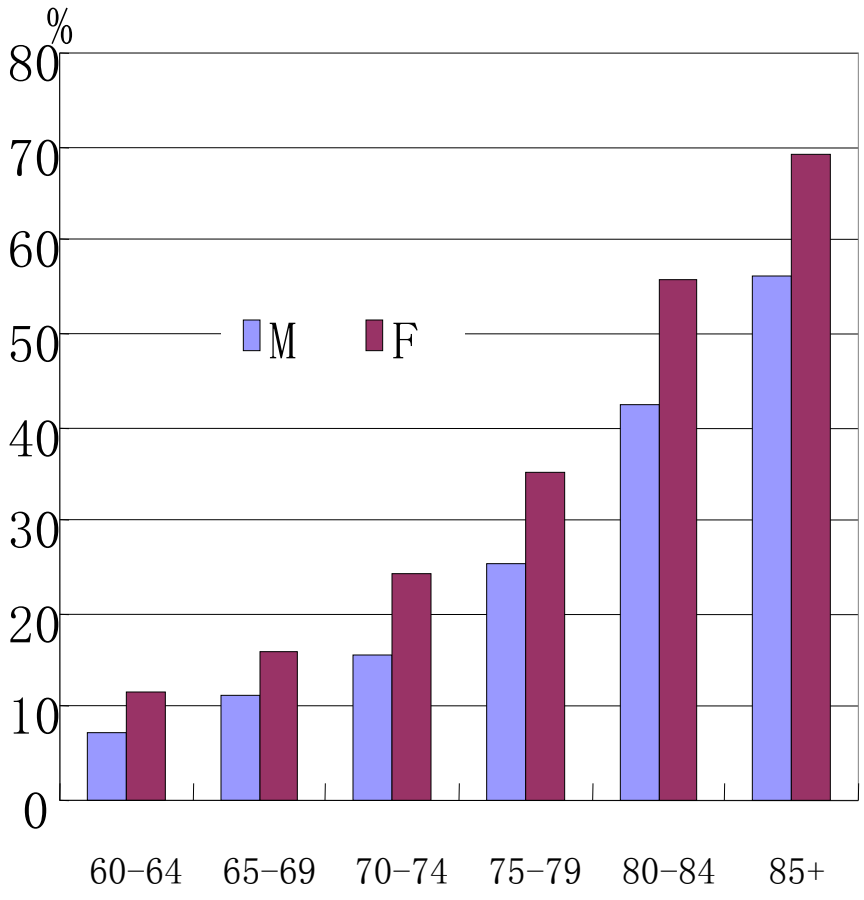
Sex-specific BADL by:

- age
- Rural-urban
- regional
- SES
- Each item of BADL

Sex-specific BADL-disability prevalence by age

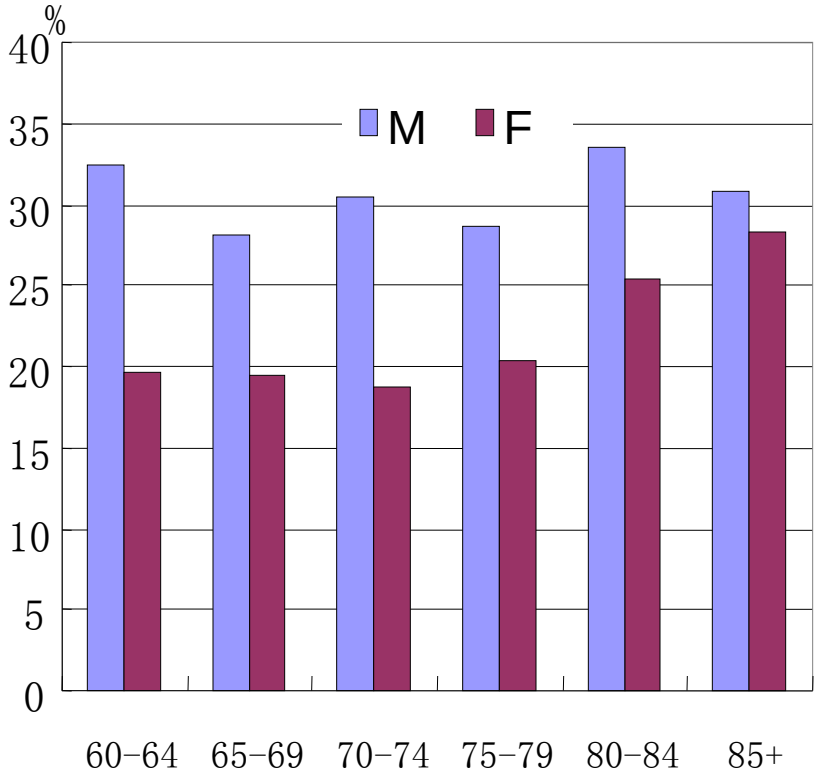


Urban

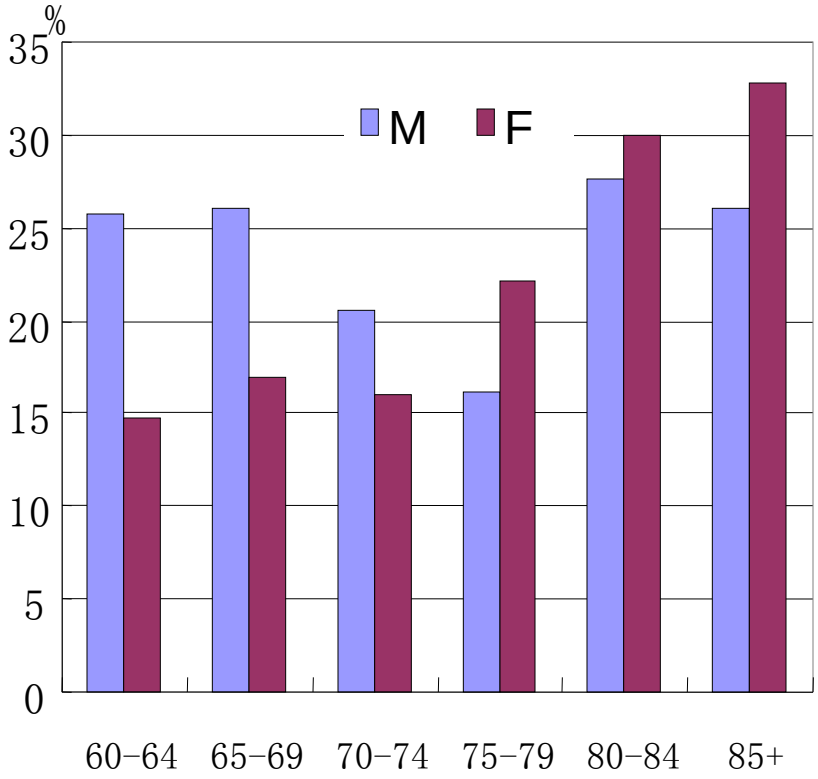


Rural

Sex-specific BADL-disability severity by age

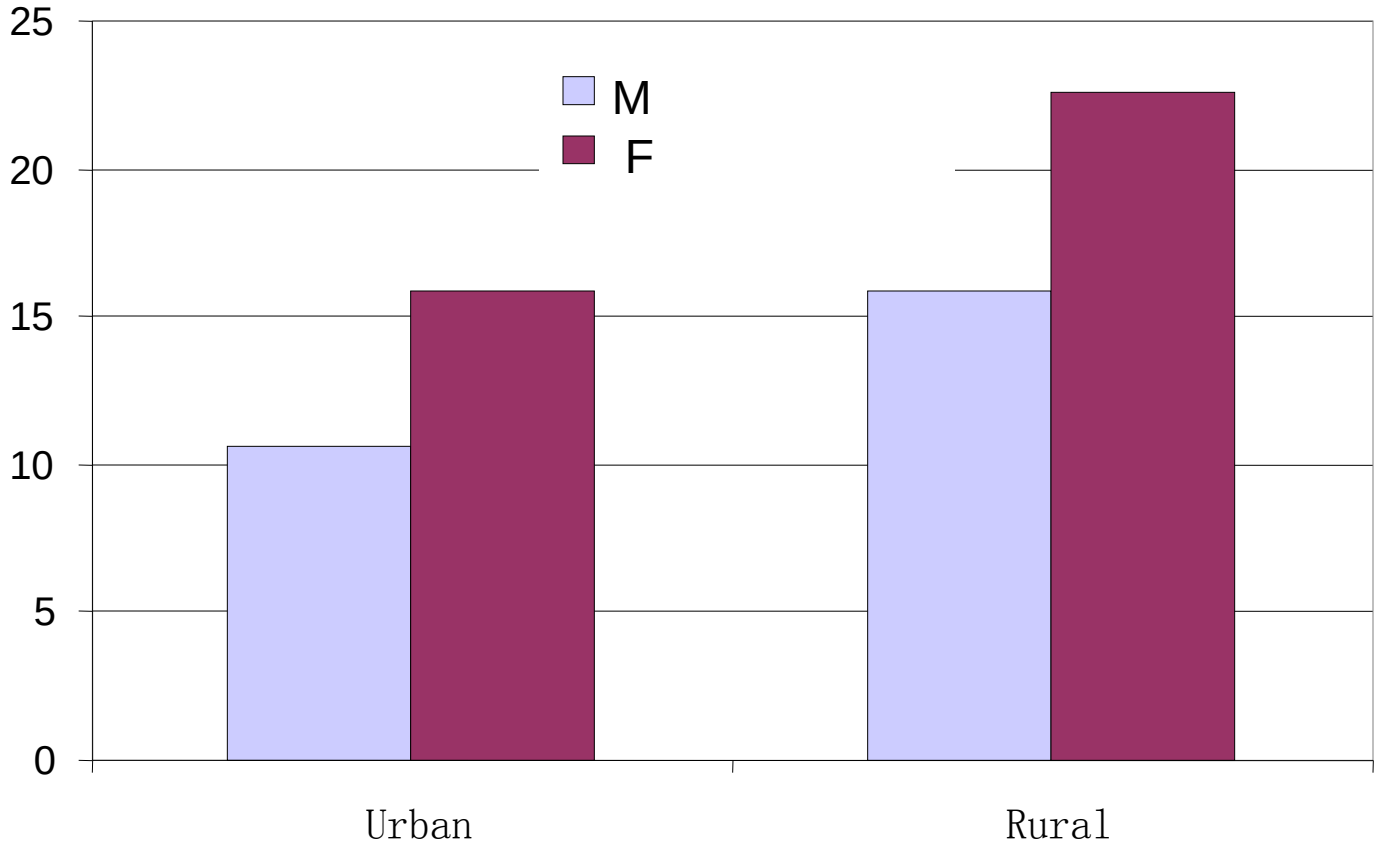


Urban

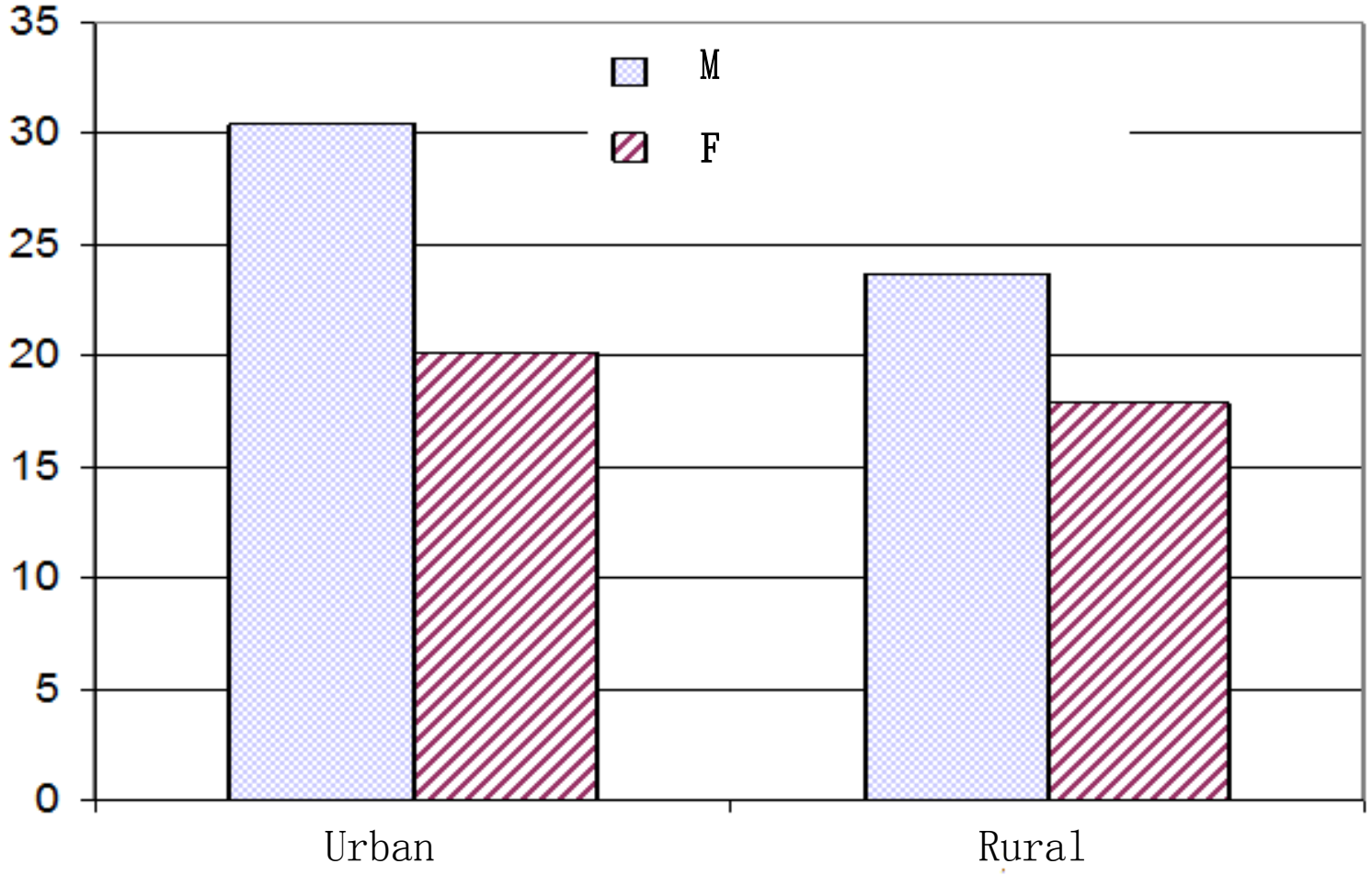


Rural

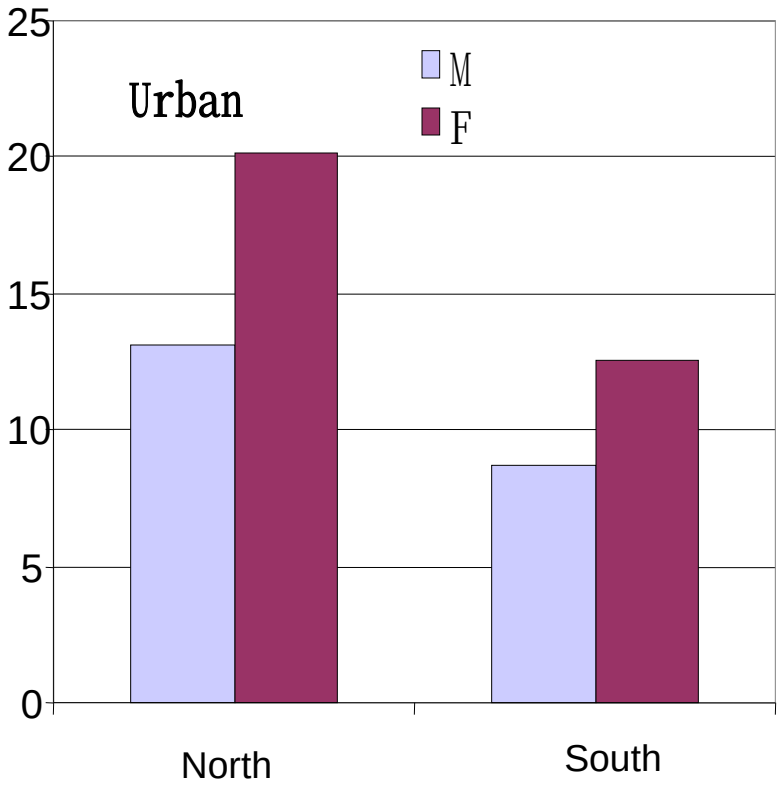
Sex-specific BADL-disability prevalence by rural-urban



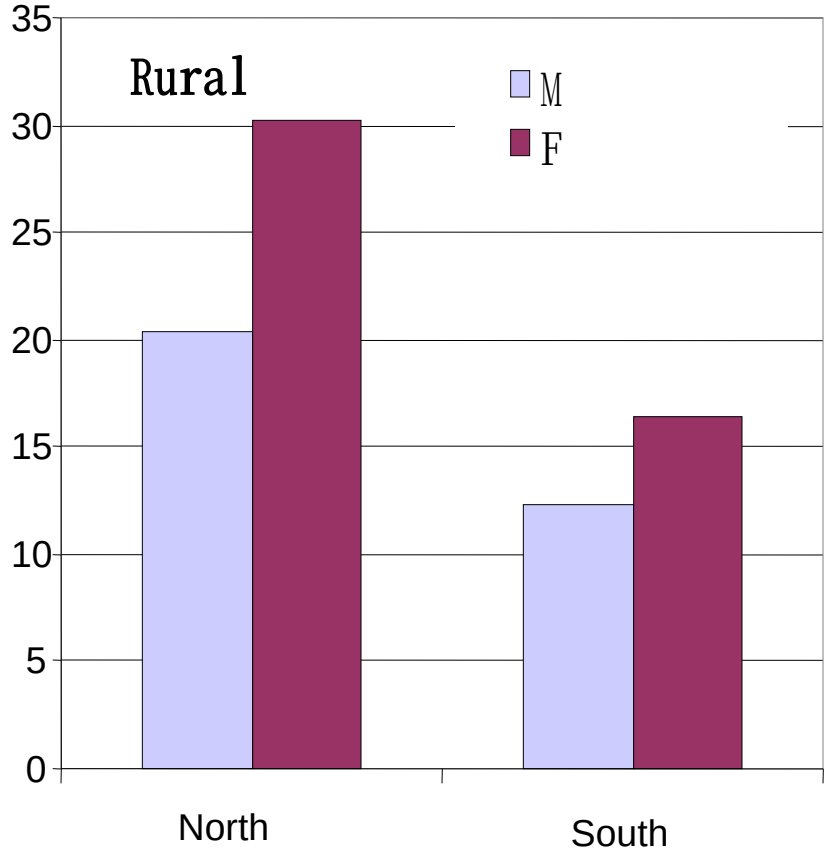
Sex-specific BADL-disability severity by rural-urban



Sex-specific BADL-disability prevalence by region

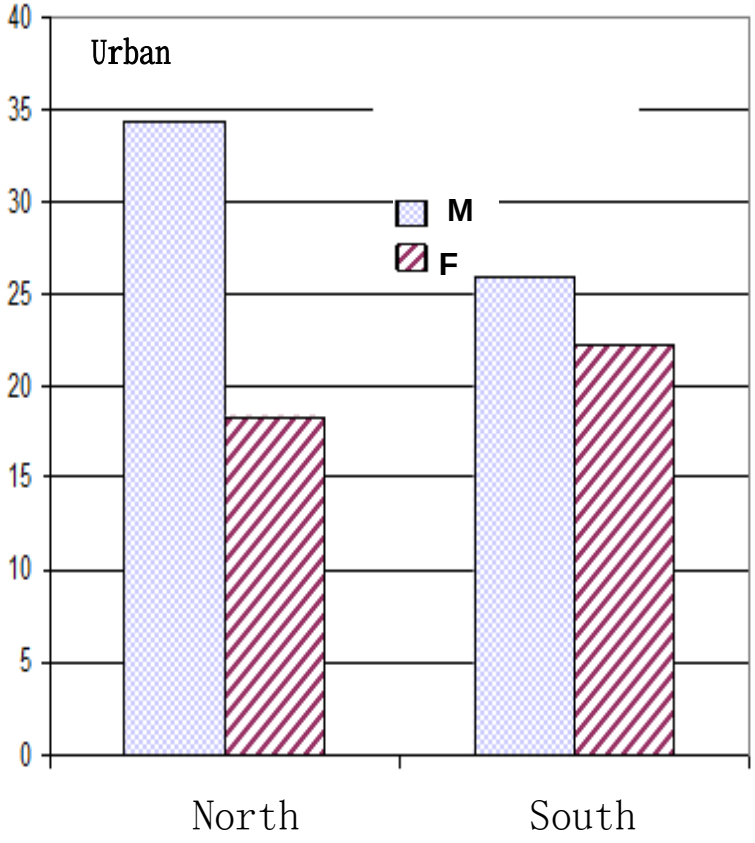


Urban

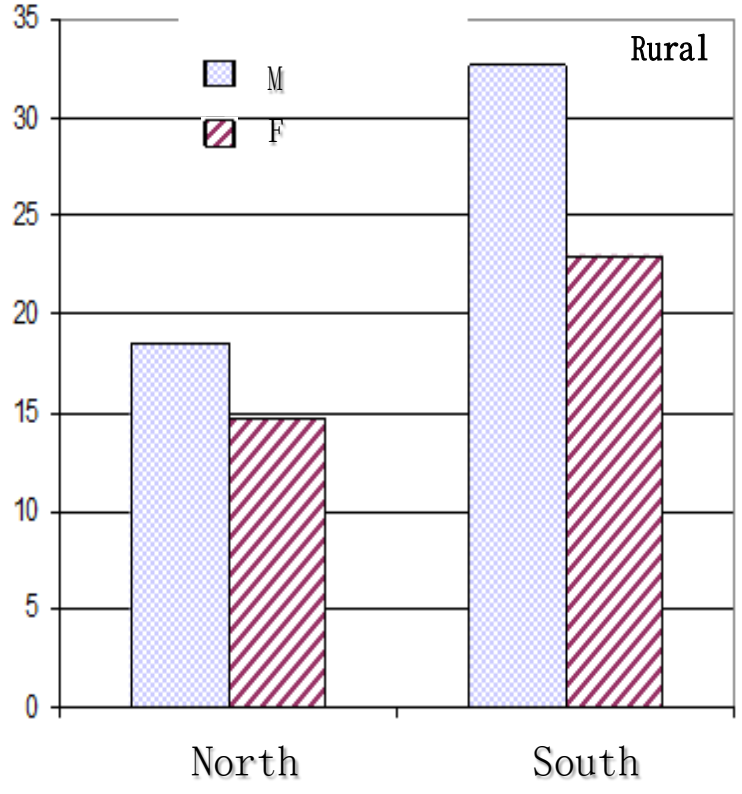


Rural

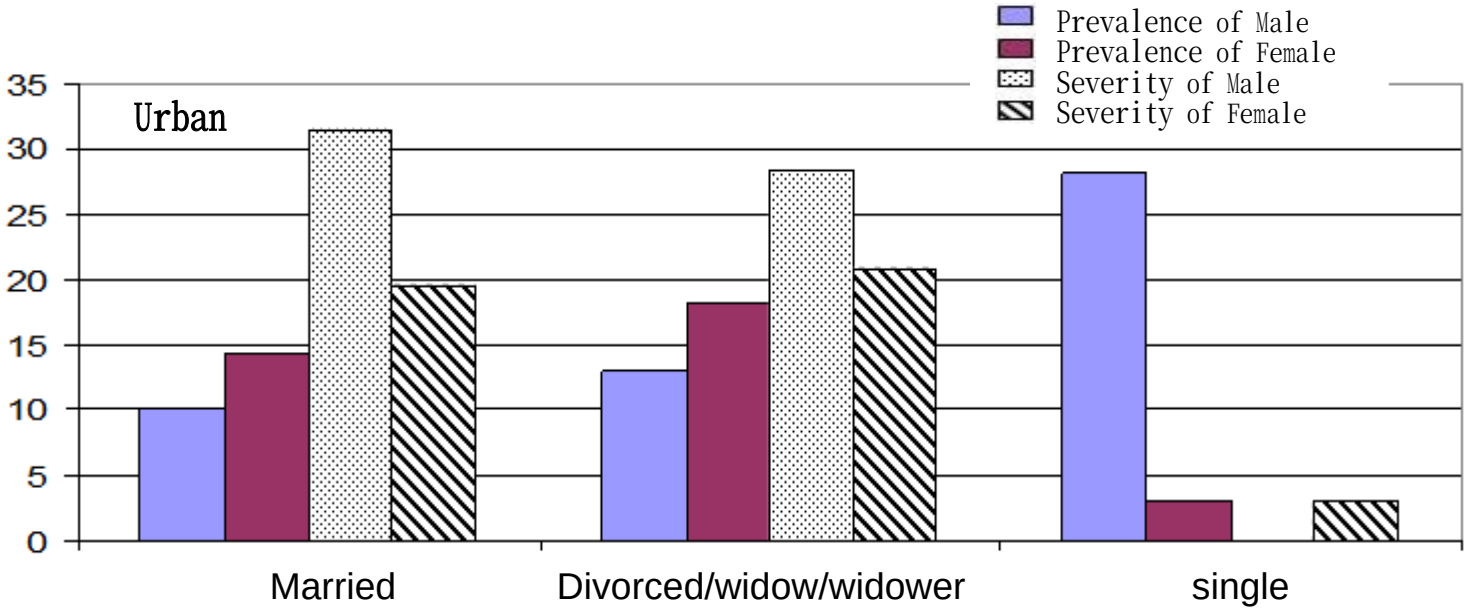
Sex-specific BADL-disability severity by region

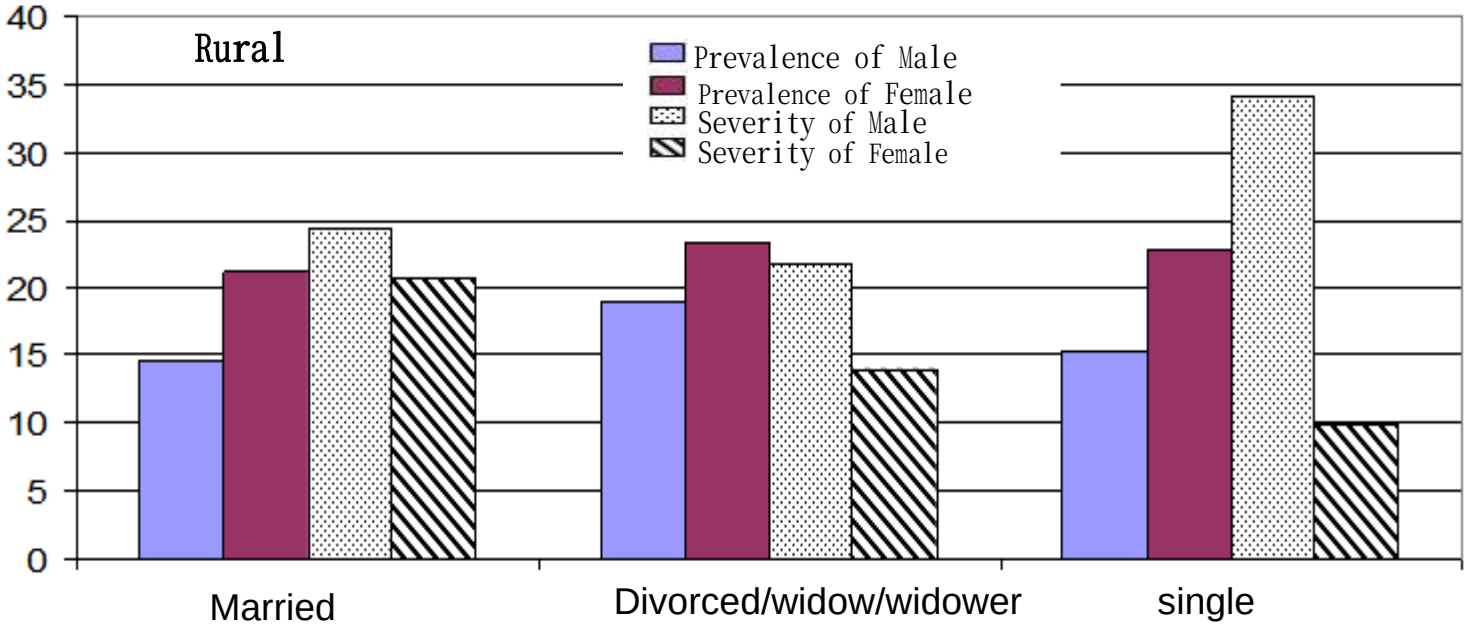


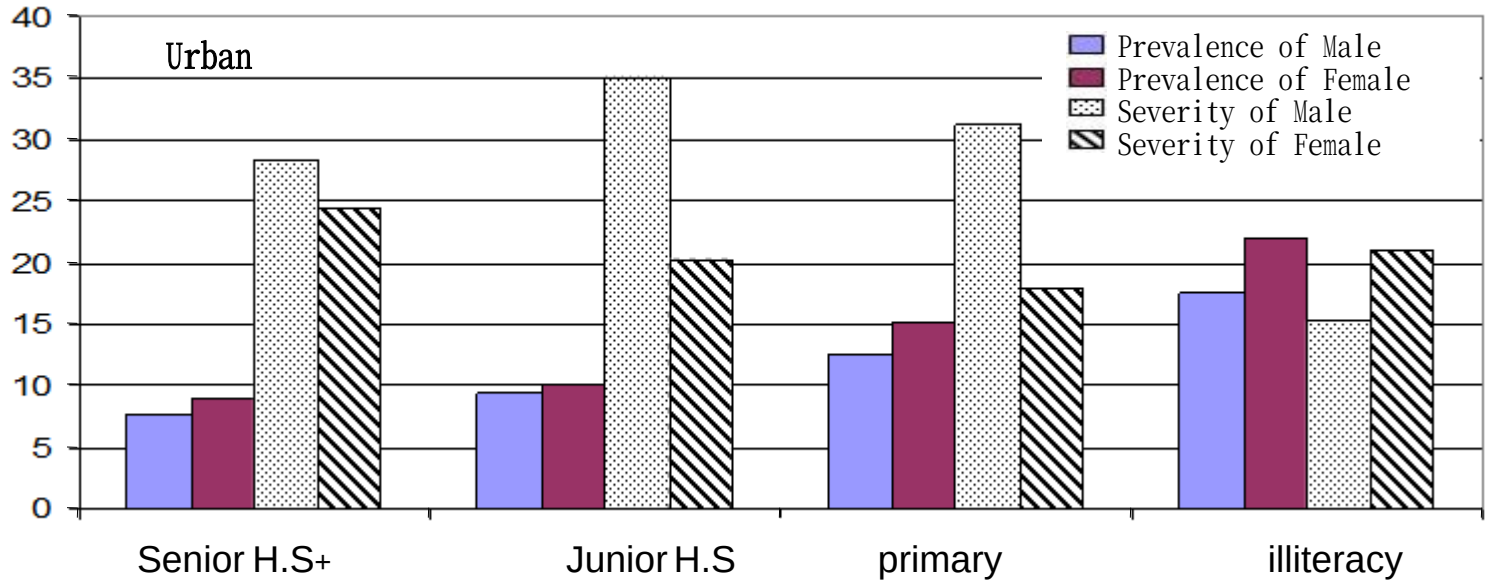
Urban

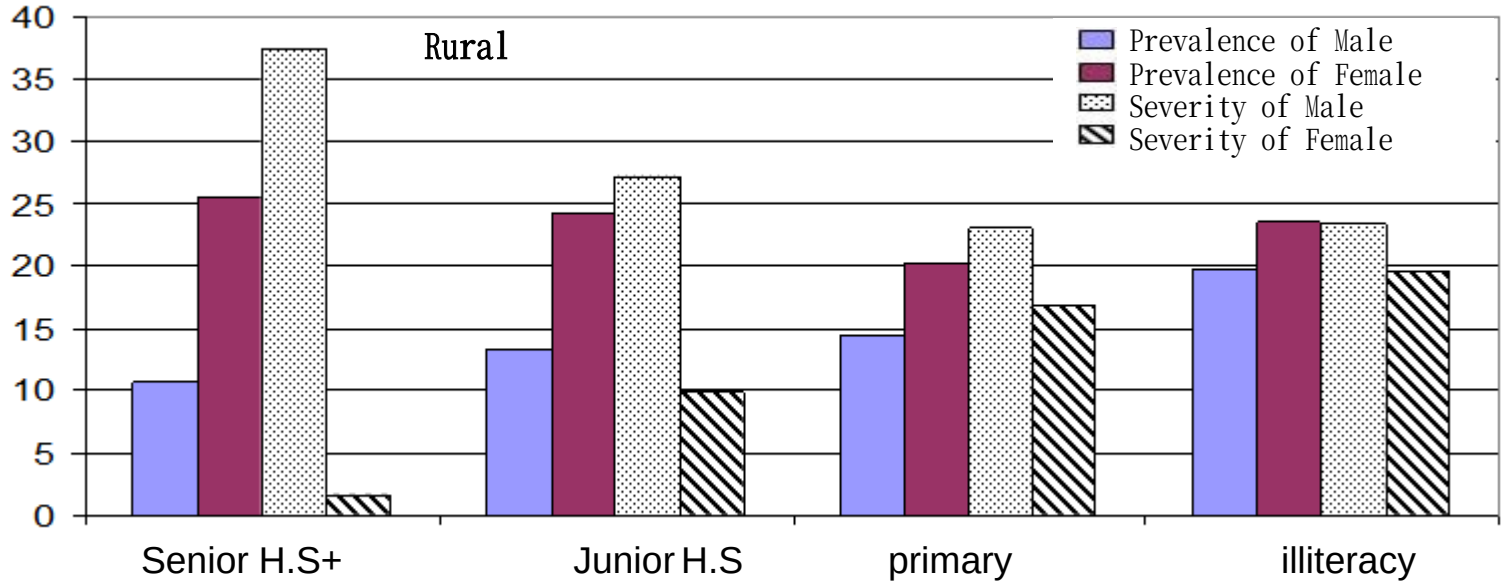


Rural

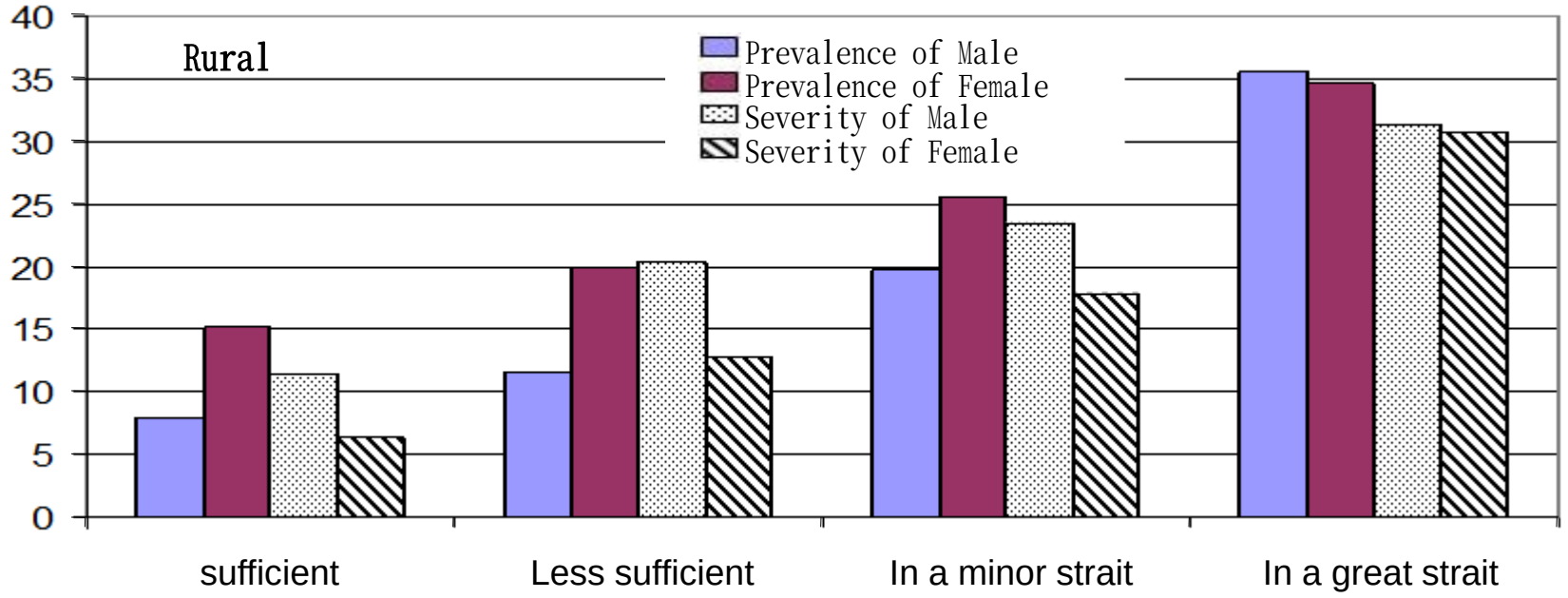

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
35
30
25
20
15
10
5
0
Married
Divorced/widow/widower
single

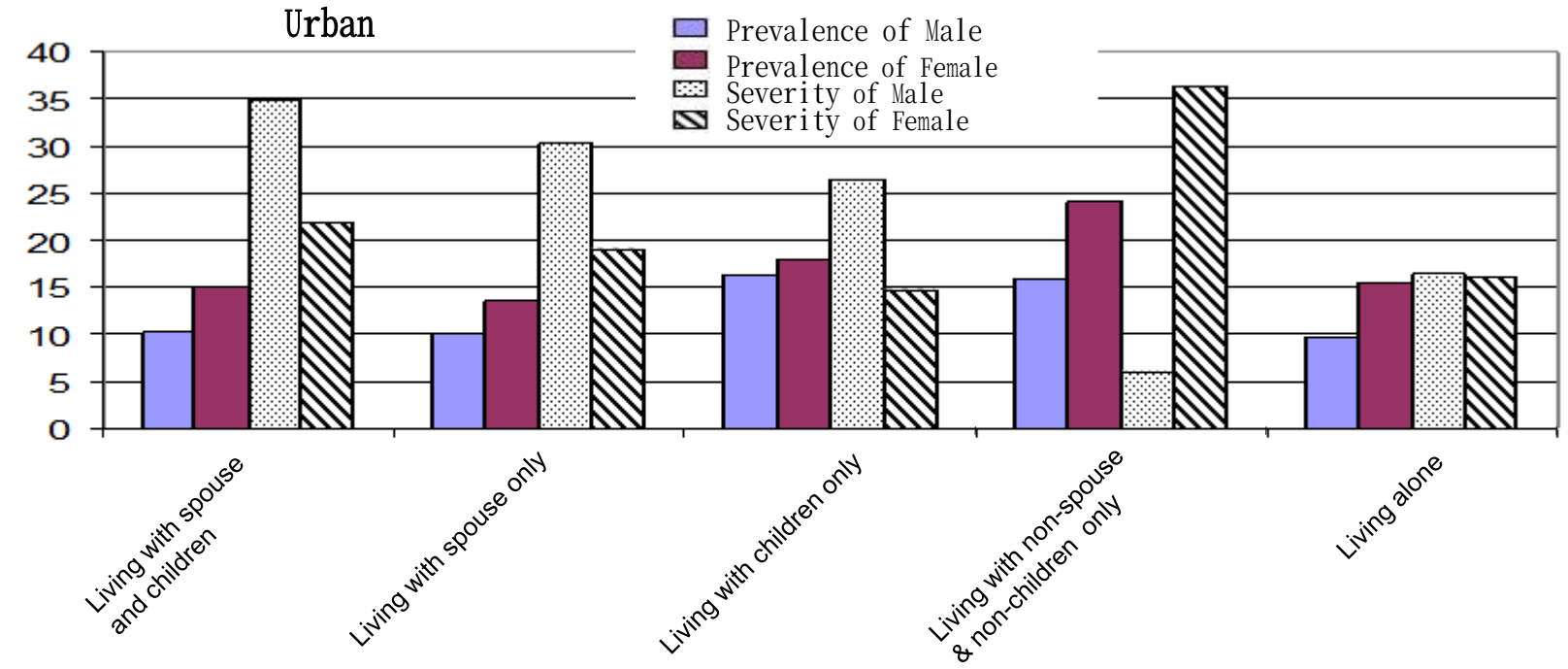

Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
Married
Divorced/widow/widower
single

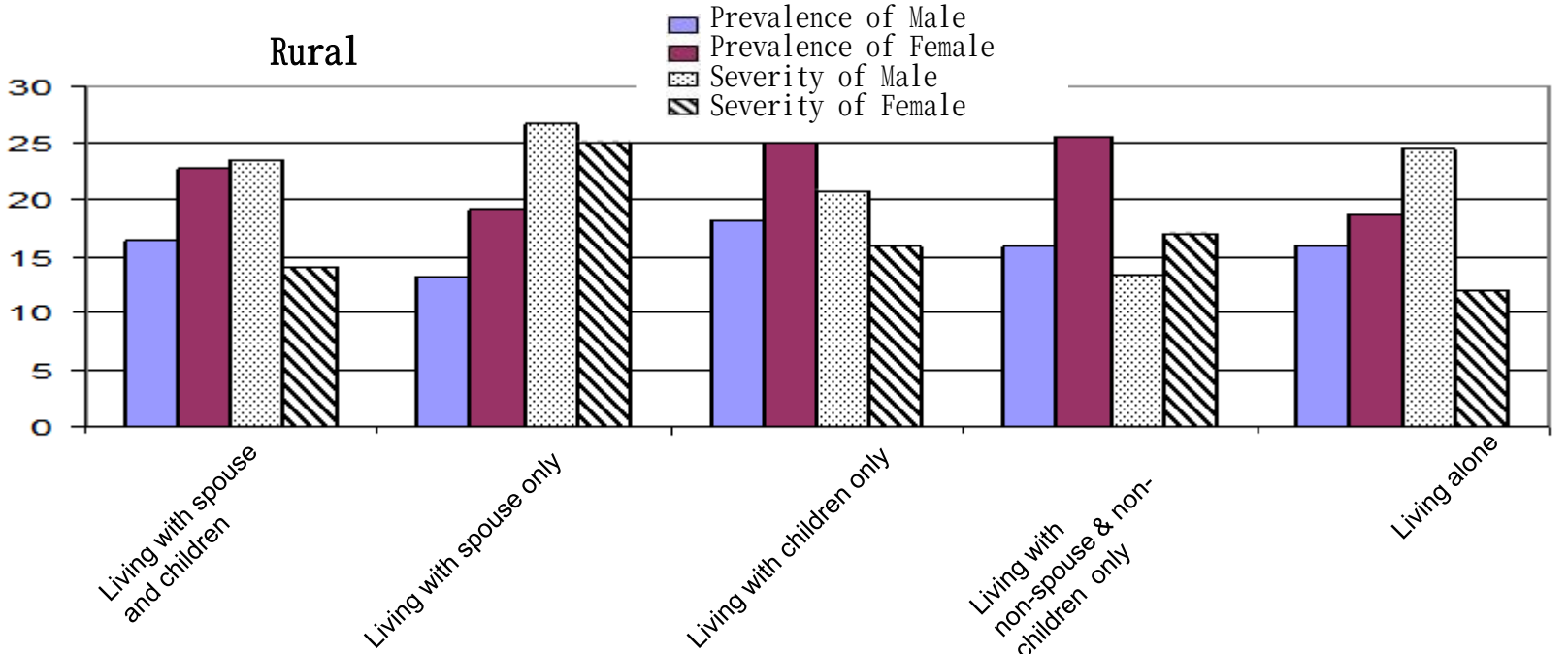

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
Senior H.S+
Junior H.S
primary
illiteracy

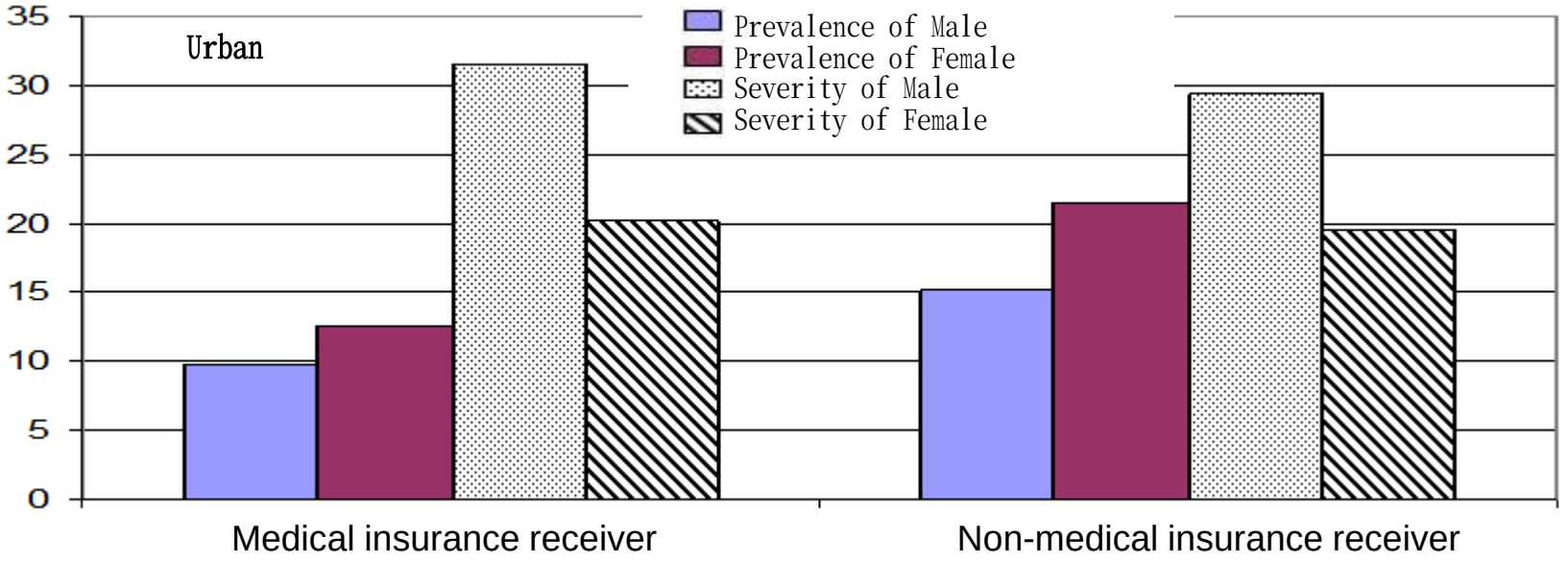

Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
Senior H.S+
Junior H.S
primary
illiteracy

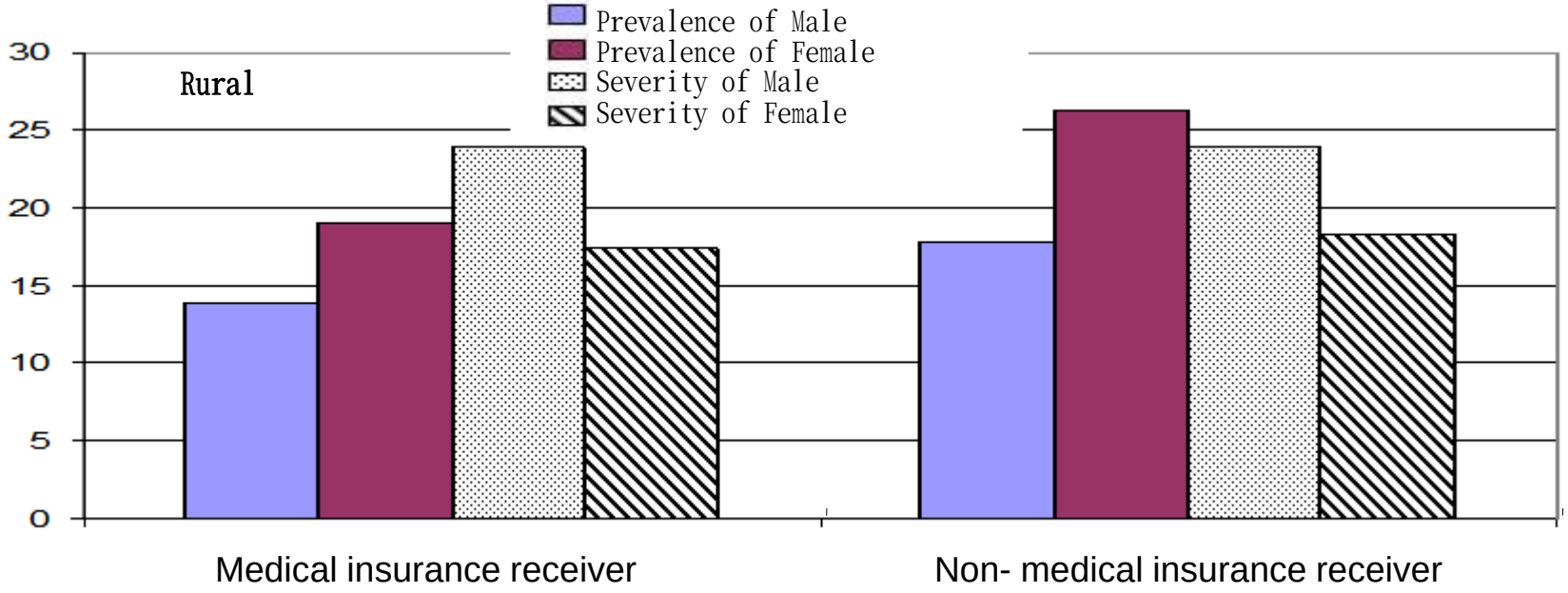

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
sufficient
Less sufficient
In a minor strait
In a great strait

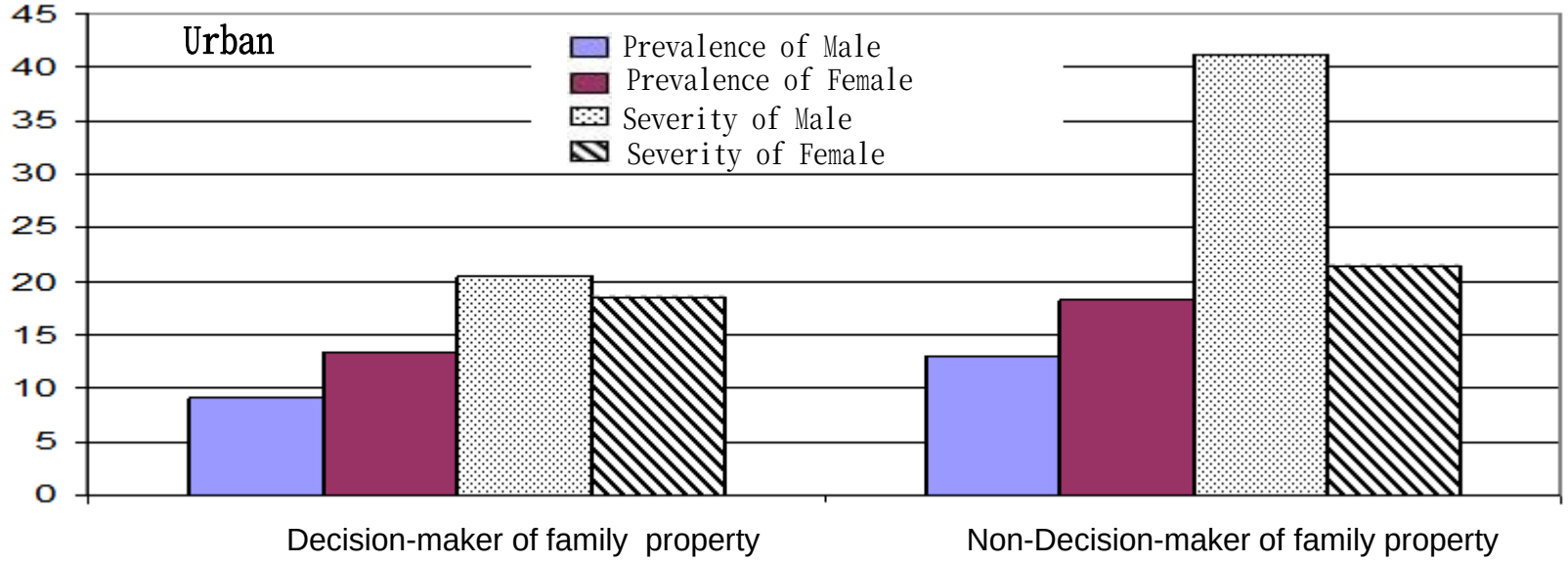

Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
sufficient
Less sufficient
In a minor strait
In a great strait

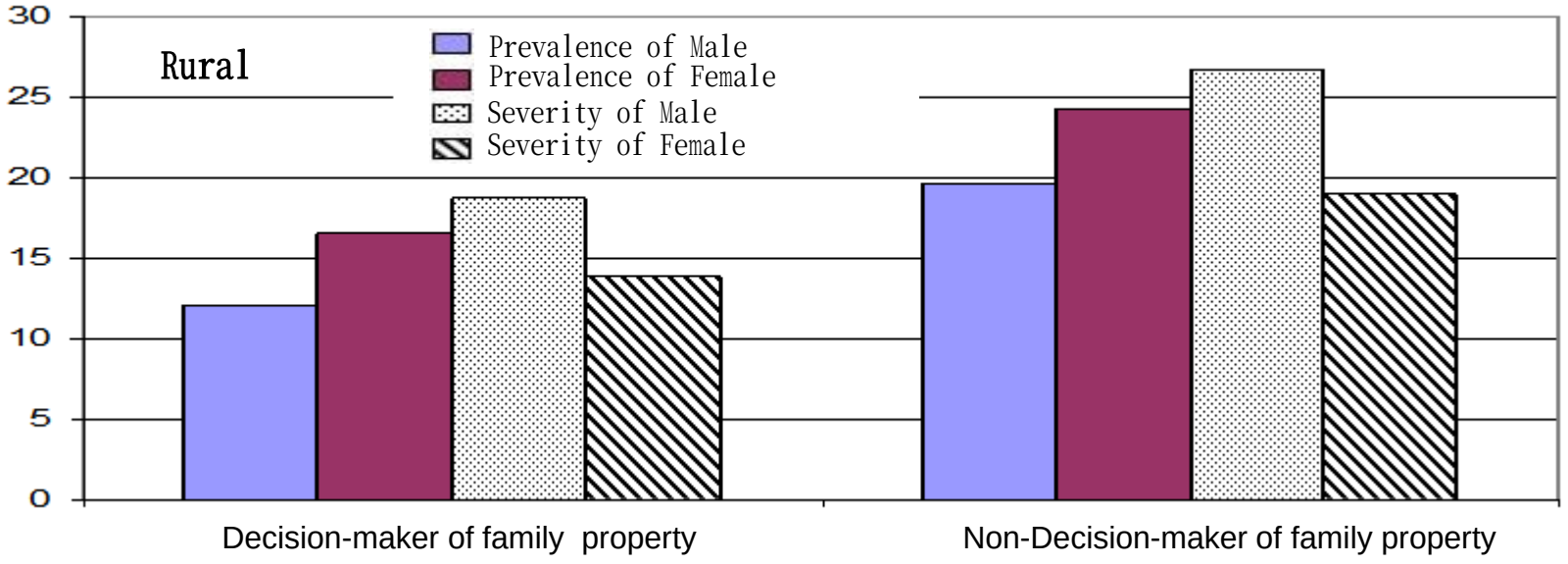

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
40
35
30
25
20
15
10
5
0
Living with spouse and children
Living with spouse only
Living with children only
Living with non-spouse & non-children only
Living alone


Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
30
25
20
15
10
5
0
Living with spouse and children
Living with spouse only
Living with children only
Living with non-spouse & non-children only
Living alone

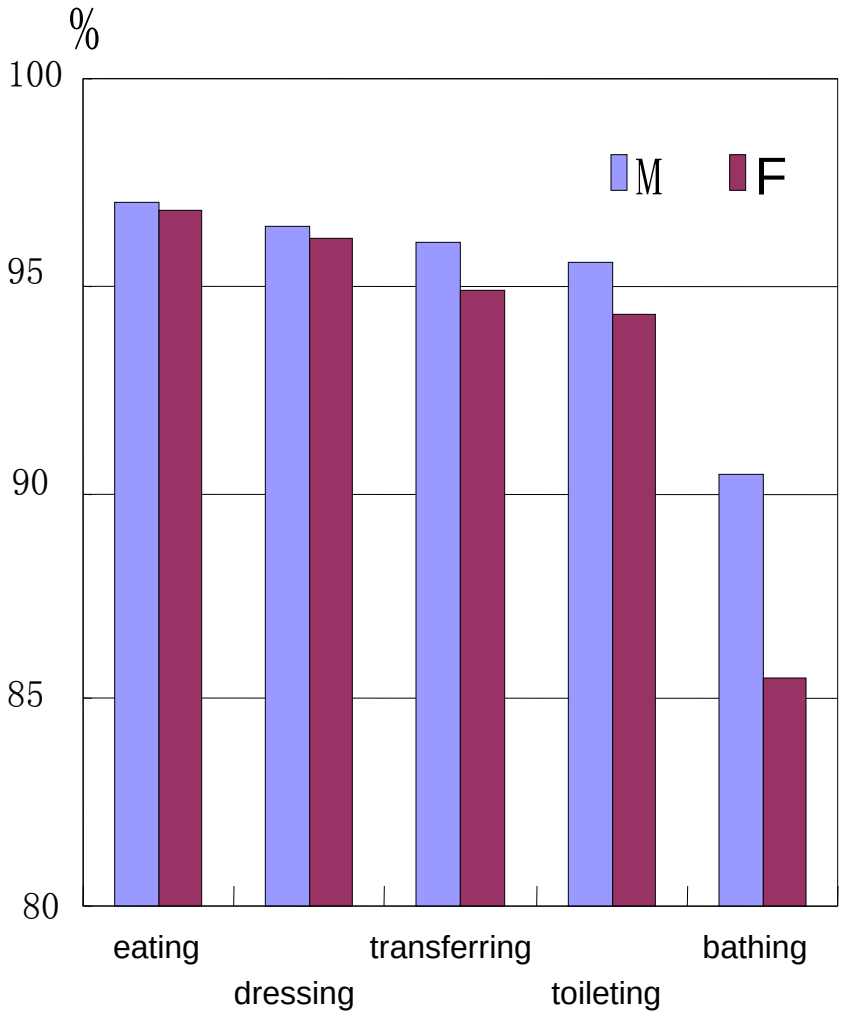

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
35
30
25
20
15
10
5
0
Medical insurance receiver
Non-medical insurance receiver


Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
30
25
20
15
10
5
0
Medical insurance receiver
Non- medical insurance receiver

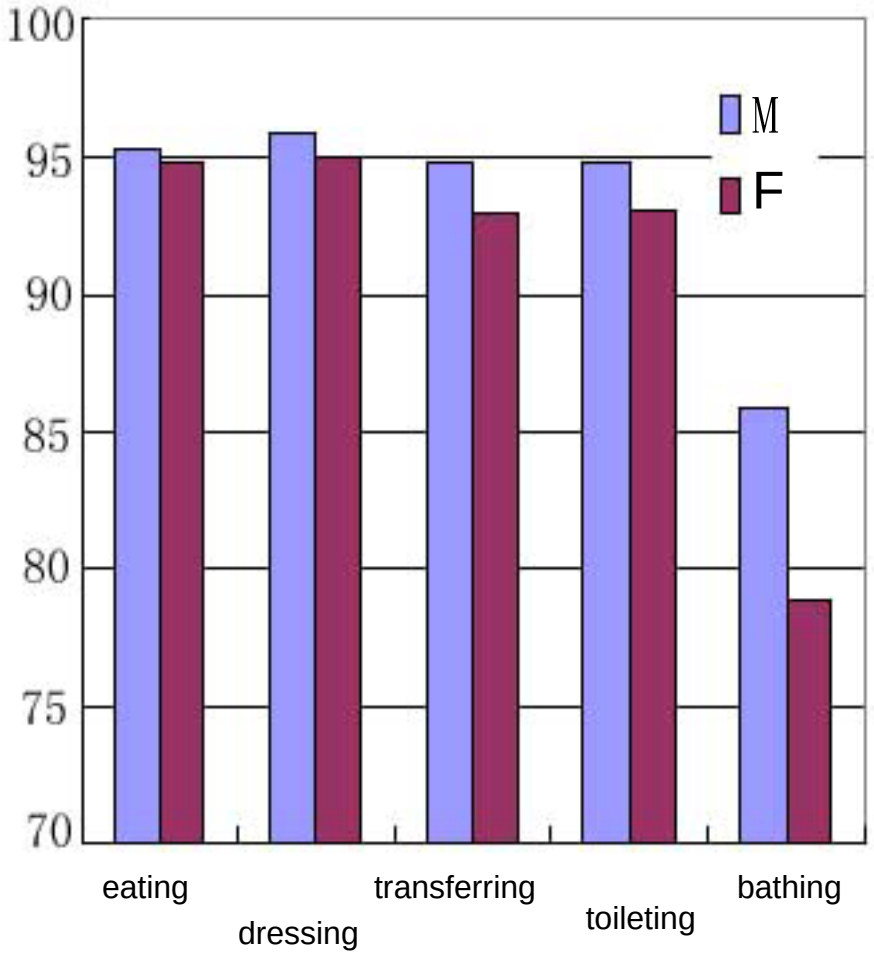

Urban
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
45
40
35
30
25
20
15
10
5
0
Decision-maker of family property
Non-Decision-maker of family property


Rural
Prevalence of Male
Prevalence of Female
Severity of Male
Severity of Female
30
25
20
15
10
5
0
Decision-maker of family property
Non-Decision-maker of family property

Sex-specific independence of BADL

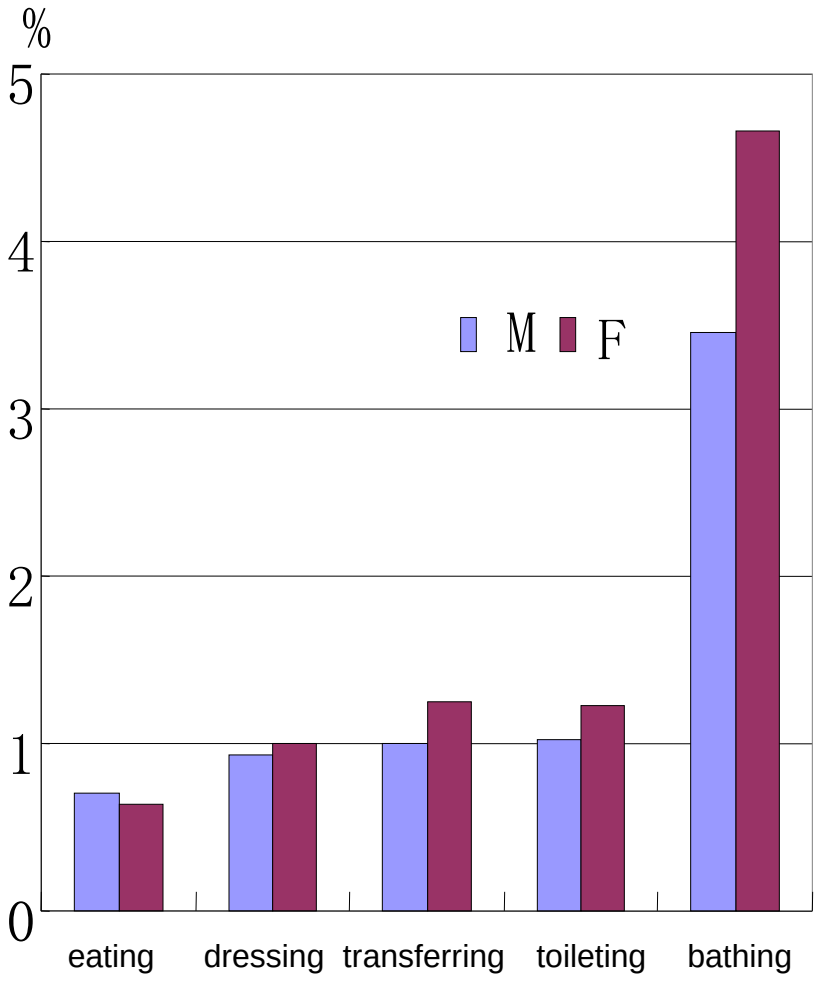


Urban

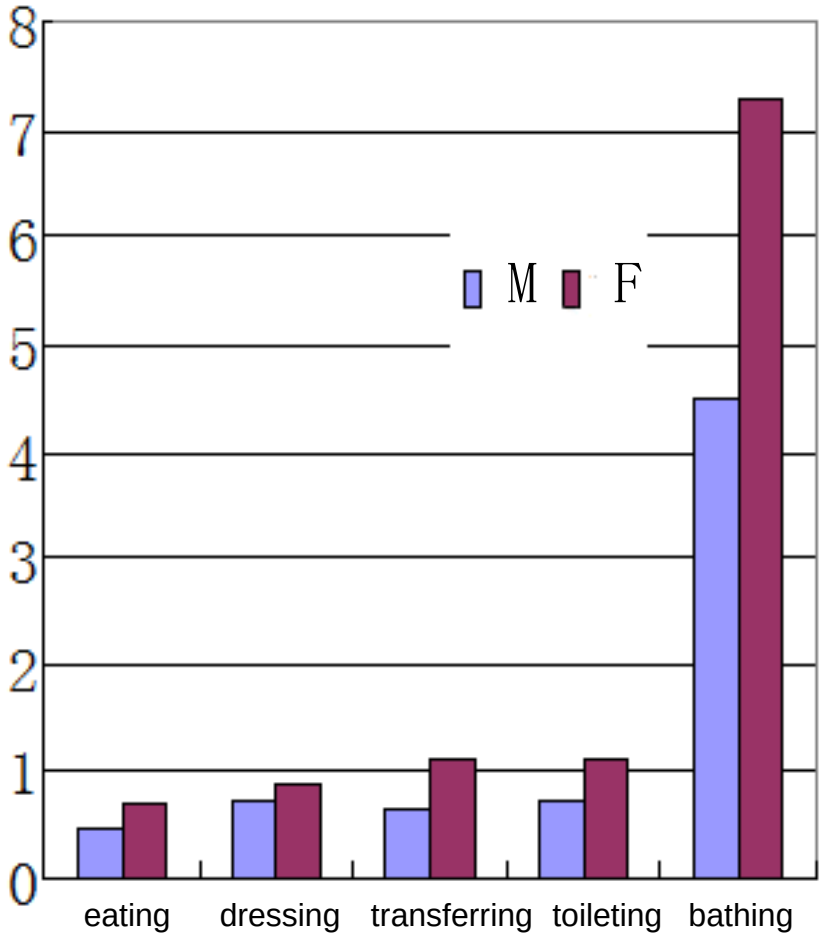


Rural

Sex-specific dependence of BADL



Urban



Rural

Factors contributing to the disparity of prevalence of BADL-disability between elderly males and females

- Based on the logit model (Urban)
- Based on the logit model (Rural)

Decomposition of the sex disparity of prevalence of BADL-disability based on the logit model（Urban）

	Model1		Model2		Model3		Model4	
Number of case	9856		9881		9655		9881	
The sex difference of BADL-disability prevalence （Female-Male）	0.0606		0.0613		0.0608		0.0613	
Factors	Absolute contribution	(%)	Absolute contribution	(%)	Absolute contribution	(%)	Absolute contribution	(%)
education	0.0162 ***	26.50	0.0207 ***	32.59	0.0236 ***	38.90	0.0148 ***	24.06
Decision maker of family's property	0.0025 ***	4.04	0.0023 ***	3.63	0.0027 ***	4.44	0.0023 ***	3.69
age	-0.0005	-0.75	0.0035 ***	5.48	-0.0045**	-7.35	0.0015	2.43
Financial status	0.0123 ***	20.13			0.0204 ***	33.60	0.0072 ***	11.71
Medi-insurance	0.0117 ***	19.01			0.0090 ***	14.82	0.0102 ***	16.61
employment	-0.0054	-8.73			-0.0066	-10.82	-0.0050	-8.10
Not hospitalizing	0.0005 *	0.81			0.0005**	0.80	0.0004 *	0.67
N of chr-disease	0.0155 ***	25.34	0.0146 ***	23.06			0.0139 ***	22.62
exercise	-0.0002	-0.35	0.0024 ***	3.71			0.0012 ***	1.92
depression			0.0051 ***	8.01			0.0045 ***	7.41
Marital status			-0.0007	-1.03	-0.0131	-21.50	-0.0064	-10.40
LA			0.0076	12.02	0.0149	24.51	0.0100	16.24
Social support			0.0001	0.10	0.0003	0.51	-0.0003	-0.52
The proportion being explained	0.0527	**86.01**	0.0557	**87.66**	0.0474	**77.94**	0.0542	**89.47**

*P<0.05， **P<0.01， ***P<0.005。

Decomposition of the sex disparity of BADL-disability prevalence based on the logit model（Rural）

	Model1		Model2		Model3		Model4	
Number of case	9867		9898		9706		9898	
The sex difference of BADL-disability prevalence （Female-Male）	0.0955		0.0955		0.0949		0.0955	
Factors	Absolute contribution	(%)	Absolute contribution	(%)	Absolute contribution	(%)	Absolute contribution	(%)
Age	0.0147***	15.35	0.0175***	18.36	0.0179***	18.89	0.0173***	18.07
Decision maker of family's property	0.0142***	14.86	0.0126***	13.22	0.0154***	16.18	0.0126***	13.25
education	0.0048	5.01	0.0046	4.80	0.0076	8.04	0.0029	3.07
Medi-insurance	-0.0014***	-1.47			-0.0005**	-0.50	-0.0008***	-0.83
Financial status	0.0027***	2.81			0.0036***	3.76	0.0006	0.58
Not hospitalizing	0.0000	0.04			0.0002	-0.26	0.0000	-0.03
N of chr-disease	0.0225***	23.55	0.0211***	22.05			0.0214***	22.39
exercise	0.0022***	2.26	0.0023***	2.43			0.0022***	2.27
depression			0.0006	0.63			0.0010***	1.04
Marital status			-0.0084	-8.84	-0.0057	-6.03	-0.0071	-7.44
LA			0.0047	4.97	0.0013	1.39	0.0033	3.44
Social support			0.0002	0.19	0.0007*	0.72	0.0002	0.26
The proportion being explained	0.0597	**62.51**	0.0550	**57.63**	0.0407	**42.84**	0.0336	**35.13**

*P<0.05， **P<0.01， ***P<0.005。

Factors to explain the sex disparity of BADL-disability prevalence (*Based on Model 4*)

Urban

- — Education
- —*Number of chronic diseases*
- —Medical insurance—Self-perceived financial status
- —Depression
- — Decision-maker of family property
- —Physical exercises

Rural

- — *Number of chronic diseases*
- —Age
- —Decision-maker of family property
- —Physical exercises
- —Depression

Findings

- Risk of occurrence is higher for females while severity of loss is higher for males.

- Education level, age, number of chronic diseases, economic status, property ownership, health care coverage rate, mental health and distribution of health care show clear sex differences and these differences can, to varying degrees, explain the gender difference in the loss of ADL function among the elderly.

Findings（cont.）

- Clear differences in social, economic and health levels between the elderly living in urban and rural areas.

- The sex gap of BADL-disability prevalence is wider for the elderly living in rural areas than for those living in urban areas. The factors explaining this difference are not the same for the rural and urban elderly.

Discussion

- The influence of gender socialization on gender gap in health should be eliminated. Education should strive to reduce the idea that boys are better than girls, which has led to a gender imbalance in China. The same rights to proper nutrition, health care and education must be shared equally between the genders. Through policies and laws, the gender barrier in occupations and the workplace must be torn down to allow both men and women the equal rights of free choice in public and private life. At the same time, we should consider the specific needs related to the female reproductive role. In public policy making, gender-blindness should be avoided.

Discussion（cont.）

- The socio-economic, cultural and health disparities between rural and urban areas are clear. Policies are required to take into account the differing needs of the populations living in these areas. Additionally, these disparities require the development and implementation of polices to rapidly reduce the gap and end the history of discriminatory policies between rural and urban areas while promoting equal opportunity for all people.

- Reducing gender health gap relies upon social reform more than medical technique improvement itself.

Thanks