

# Active Life Expectancy of Chinese Elderly

**Lily Wu , Xiaochun Qiao**

*Graduate Student*

*Department of Demography*

*Renmin University of China*



# Outline of Presentation

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- Introduction
- Data and Method
- Results and Analyses
- Conclusions



# Introduction

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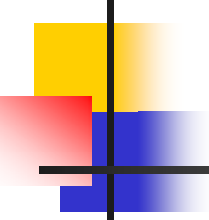
- Active Life Expectancy (ALE) is defined as Years of Life Expectancy Free of Personal Activities of Daily Living Problems.
- ALE is an important dimension of Healthy Life Expectancy, but few studies has addressed this issue.



# Review

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- Dr. Mei Wang (1993) did a systematic research on healthy life expectancy in China in her PhD thesis “Living longer ≠ living better”. One of the thesis chapters deals particularly with ALE of Chinese elderly.

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- The most recent work on Chinese healthy life expectancies was the paper “Health Expectancy of China” by Dr. Xiaochun Qiao (1997) who calculated life expectancy free of personal activities of daily living problems.



# Objective

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- The purpose of our study is to update the knowledge by examining gender and urban-rural differentials in the active life expectancy of Chinese elderly.
- Specifically, in our paper, we calculate and decompose the active life expectancy of elderly people into that of **dressing**, **eating**, **bathing** and **toileting** respectively.

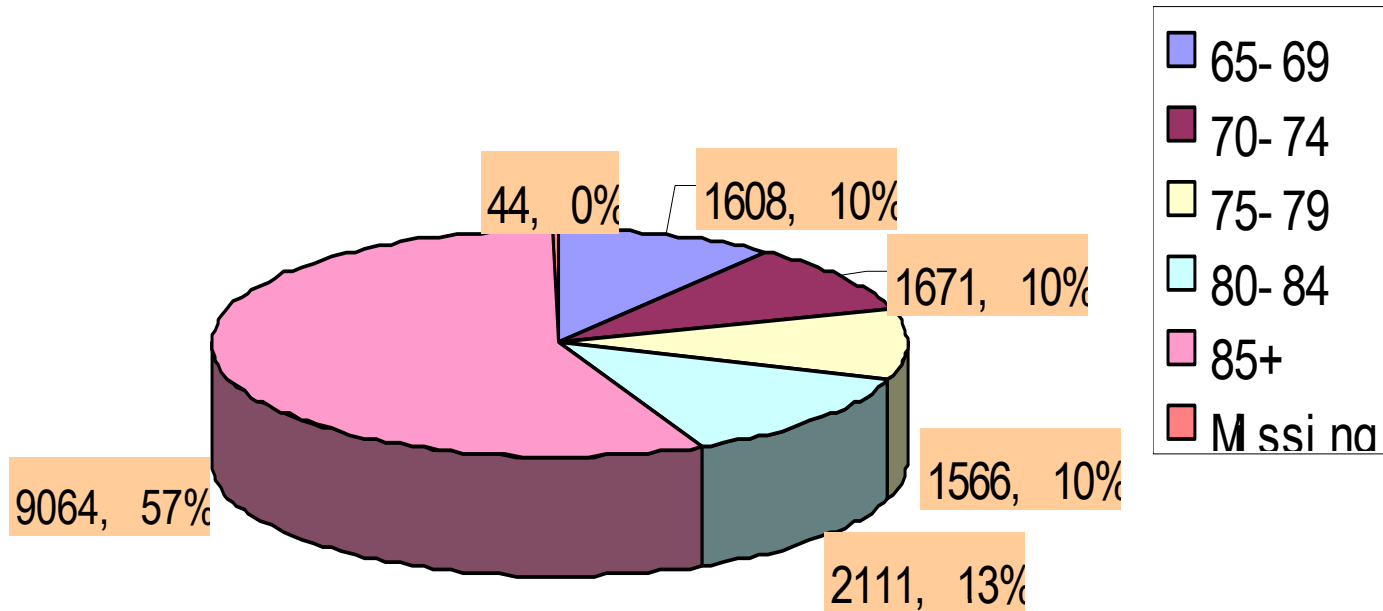


# Data

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- The third wave (2002) of Chinese Longitudinal Healthy Longevity Survey (CLHLS) , which covers 22 provinces of China with a sample of 16,064 elderly aged 65 and over.
- The survey was conducted in 2002 by the Center for Healthy Aging and Family Studies of Peking University.

# The distribution of sample







# Methodology

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- The Sullivan method was used to compute active life expectancy in this paper due to the use of cross-sectional data.
- The life table derived from mortality data of national sampling survey conducted by the national Bureau of Statistics in 2002.



# Results

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- Active Life Expectancy (ALE)
- Active Life Expectancy by dressing (DALE)
- Active Life Expectancy by eating (EALE)
- Active Life Expectancy by bathing (BALE)
- Active Life Expectancy by toileting (TALE)



# Definition

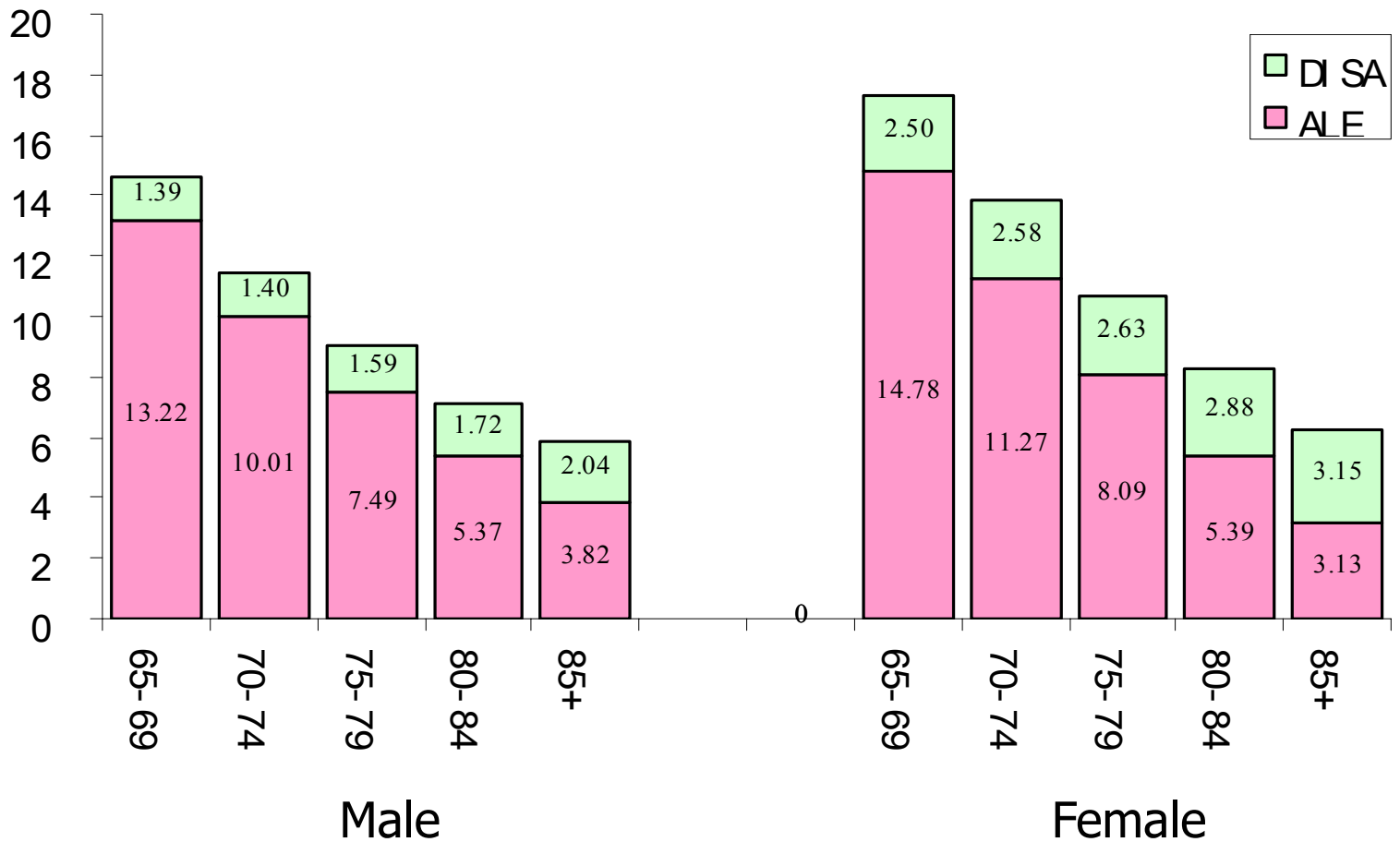
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- The disabled state is defined as having difficulty with any one of four Activities of Daily Living (dressing, eating, bathing, toileting). The active state is defined as not having any of these difficulties.
- We assume that the four aspects are independent, not being affected mutually.

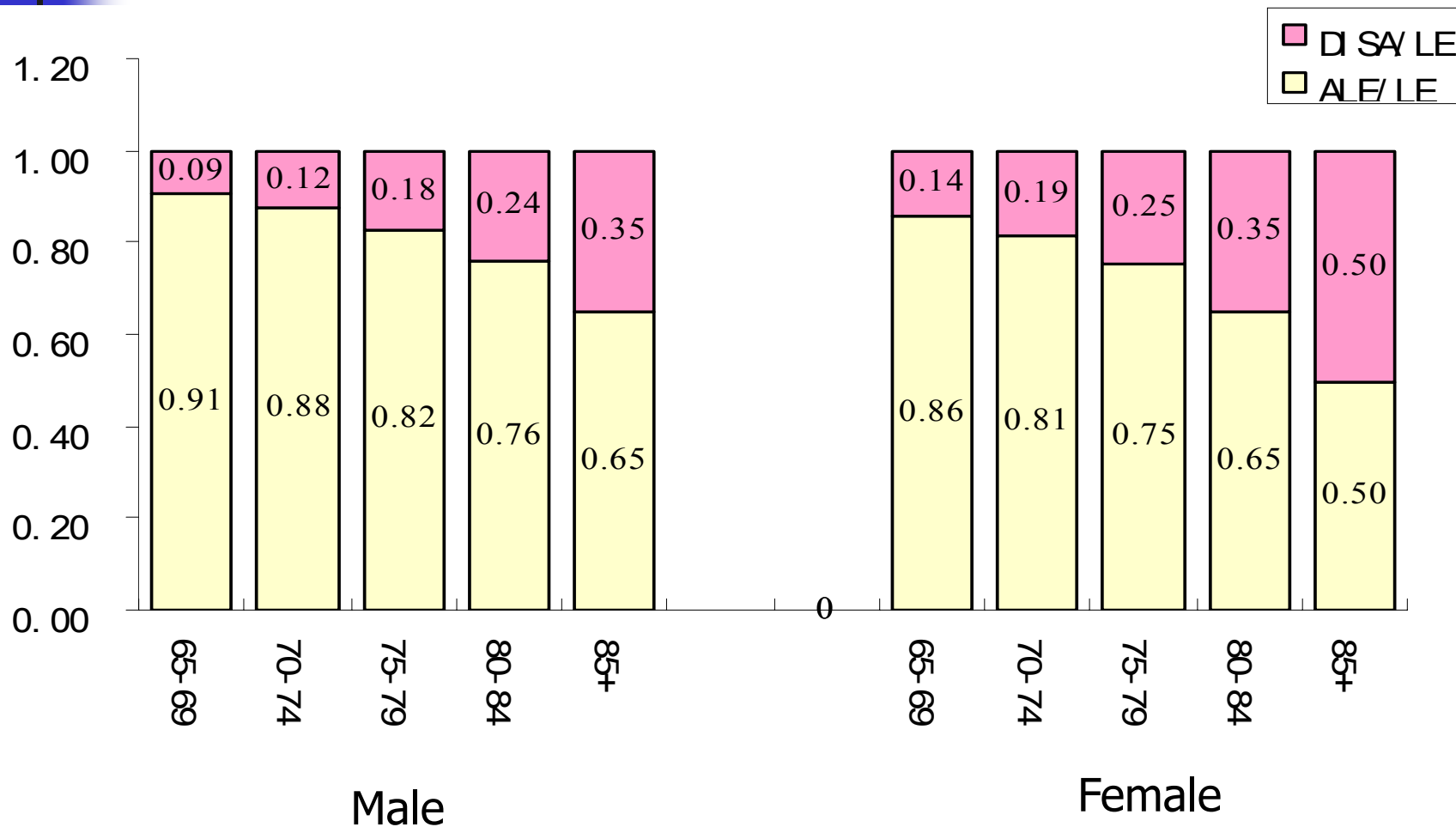
Table 1. Active Life Expectancy (male and female)

		LE	ALE	ALE/LE	SE(ALE)
Male	65-69	14.60	13.22	0.91	0.055
	70-74	11.41	10.01	0.88	0.052
	75-79	9.08	7.49	0.82	0.057
	80-84	7.09	5.37	0.76	0.050
	85+	5.86	3.82	0.65	0.049
Female	65-69	17.28	14.78	0.86	0.070
	70-74	13.86	11.27	0.81	0.069
	75-79	10.72	8.09	0.75	0.065
	80-84	8.26	5.39	0.65	0.058
	85+	6.28	3.13	0.50	0.041

# Figure 1. Active Life Expectancy (male and female)



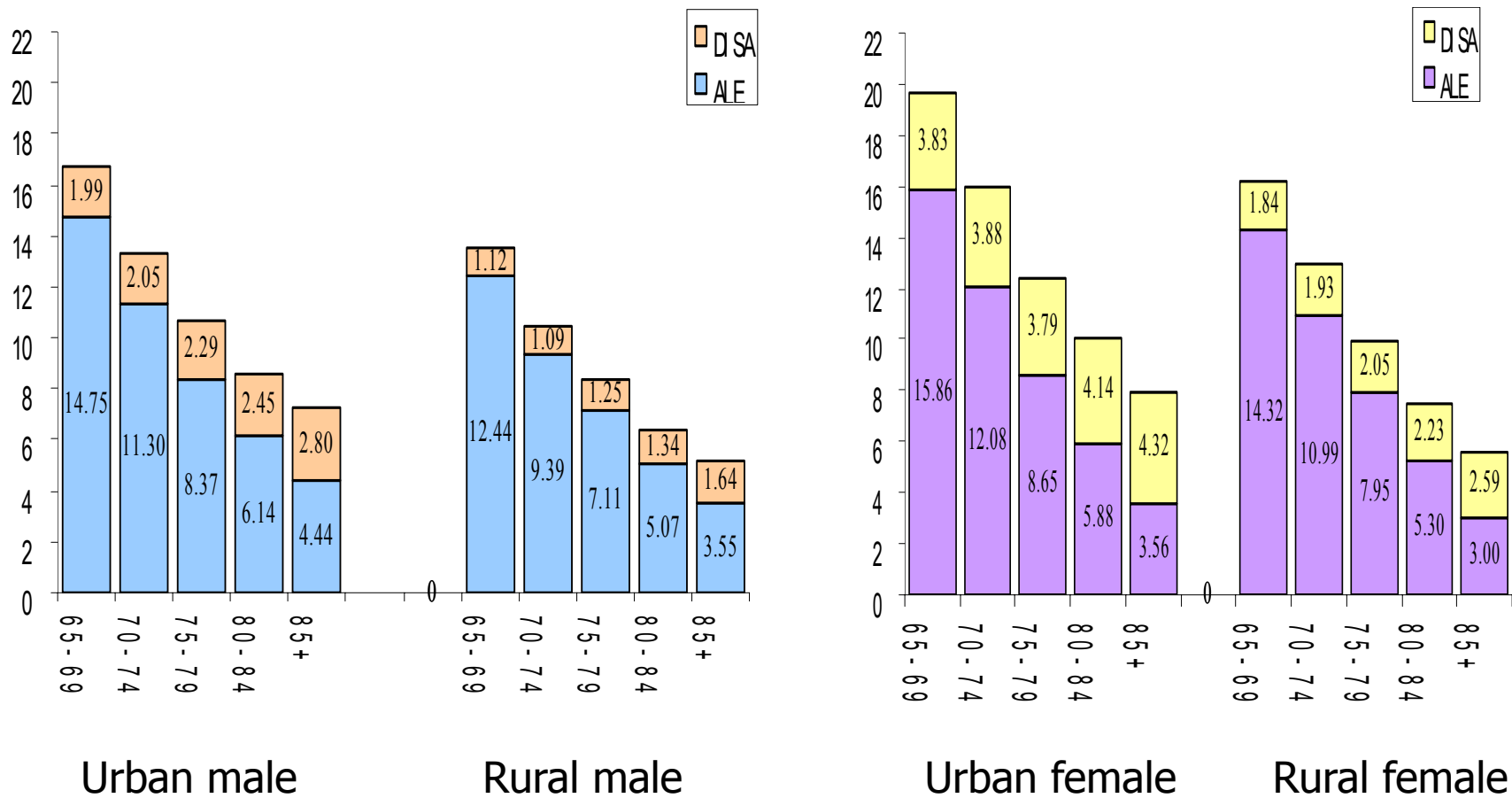
# Figure 2. The Proportion of Active Duration (male and female)



## Table 2. Active Life Expectancy (urban and rural)

		Urban				Rural			
		LE	ALE	ALE/LE	SE(ALE)	LE	ALE	ALE/LE	SE(ALE)
Male	65-69	16.73	14.75	0.88	0.093	13.56	12.44	0.92	0.070
	70-74	13.35	11.30	0.85	0.092	10.48	9.39	0.90	0.065
	75-79	10.66	8.37	0.79	0.098	8.36	7.11	0.85	0.069
	80-84	8.59	6.14	0.71	0.086	6.41	5.07	0.79	0.063
	85+	7.24	4.44	0.61	0.091	5.19	3.55	0.68	0.057
Female	65-69	19.69	15.86	0.81	0.126	16.16	14.32	0.89	0.080
	70-74	15.96	12.08	0.76	0.123	12.92	10.99	0.85	0.081
	75-79	12.44	8.65	0.70	0.108	9.99	7.95	0.80	0.080
	80-84	10.02	5.88	0.59	0.097	7.53	5.30	0.70	0.073
	85+	7.88	3.56	0.45	0.077	5.58	3.00	0.54	0.050

# Figure 3. Active Life Expectancy (urban and rural)

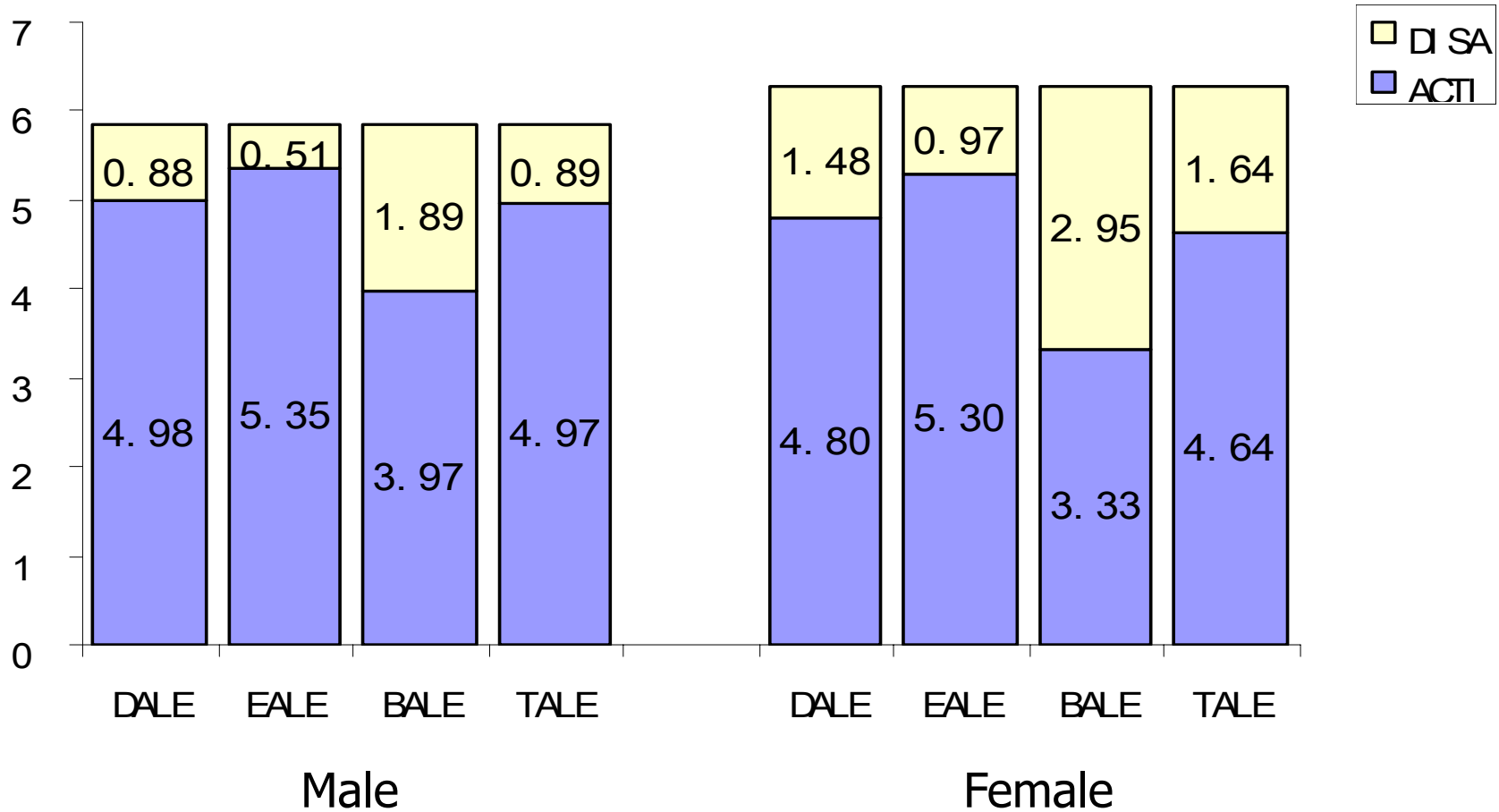




# Table 3. Respective Active Life Expectancy (Male and Female)

		65			85		
		Value	Pro./LE)	SE	Value	Pro./LE)	SE
Male	LE	14.60			5.86		
	DALE	14.09	0.97	0.032	4.98	0.85	0.036
	EALE	14.31	0.98	0.025	5.35	0.91	0.029
	BALE	13.32	0.91	0.053	3.97	0.68	0.048
	TALE	14.09	0.96	0.033	4.97	0.85	0.037
Female	LE	17.28			6.28		
	DALE	16.35	0.95	0.039	4.80	0.76	0.035
	EALE	16.68	0.97	0.031	5.30	0.84	0.030
	BALE	14.95	0.87	0.067	3.33	0.53	0.041
	TALE	16.28	0.94	0.039	4.64	0.74	0.036

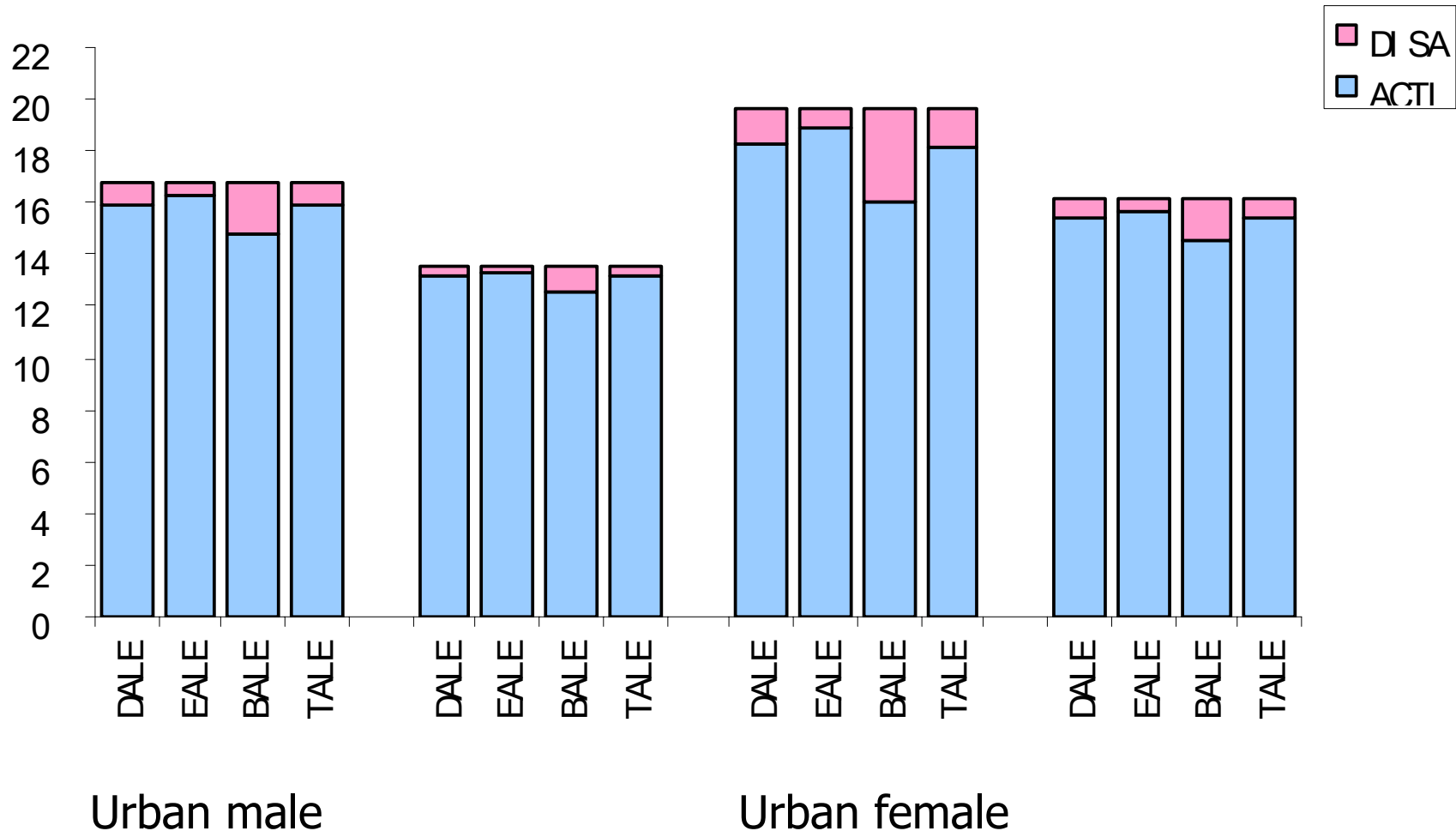
# Figure 4. Respective Active Life Expectancy (Male and Female at 85)



# Table 4. Respective Active Life Expectancy

		Urban				Rural			
		65		85		65		85	
		Value	Pro./LE)	Value	Pro./LE)	Value	Pro./LE)	Value	Pro./LE)
Male	LE	16.73		7.24		13.56		5.19	
	DAL <sub>E</sub>	15.95	0.95	6.08	0.84	13.18	0.97	4.45	0.86
	EAL <sub>E</sub>	16.31	0.97	6.61	0.91	13.33	0.98	4.75	0.91
	BAL <sub>E</sub>	14.84	0.89	4.60	0.64	12.55	0.93	3.70	0.71
	TAL <sub>E</sub>	15.95	0.95	6.04	0.83	13.17	0.97	4.47	0.86
		LE	19.69		7.88		16.16		5.58
	DAL <sub>E</sub>	<b>18.28</b>	<b>0.93</b>	<b>5.84</b>	<b>0.74</b>	15.42	0.95	4.38	0.78

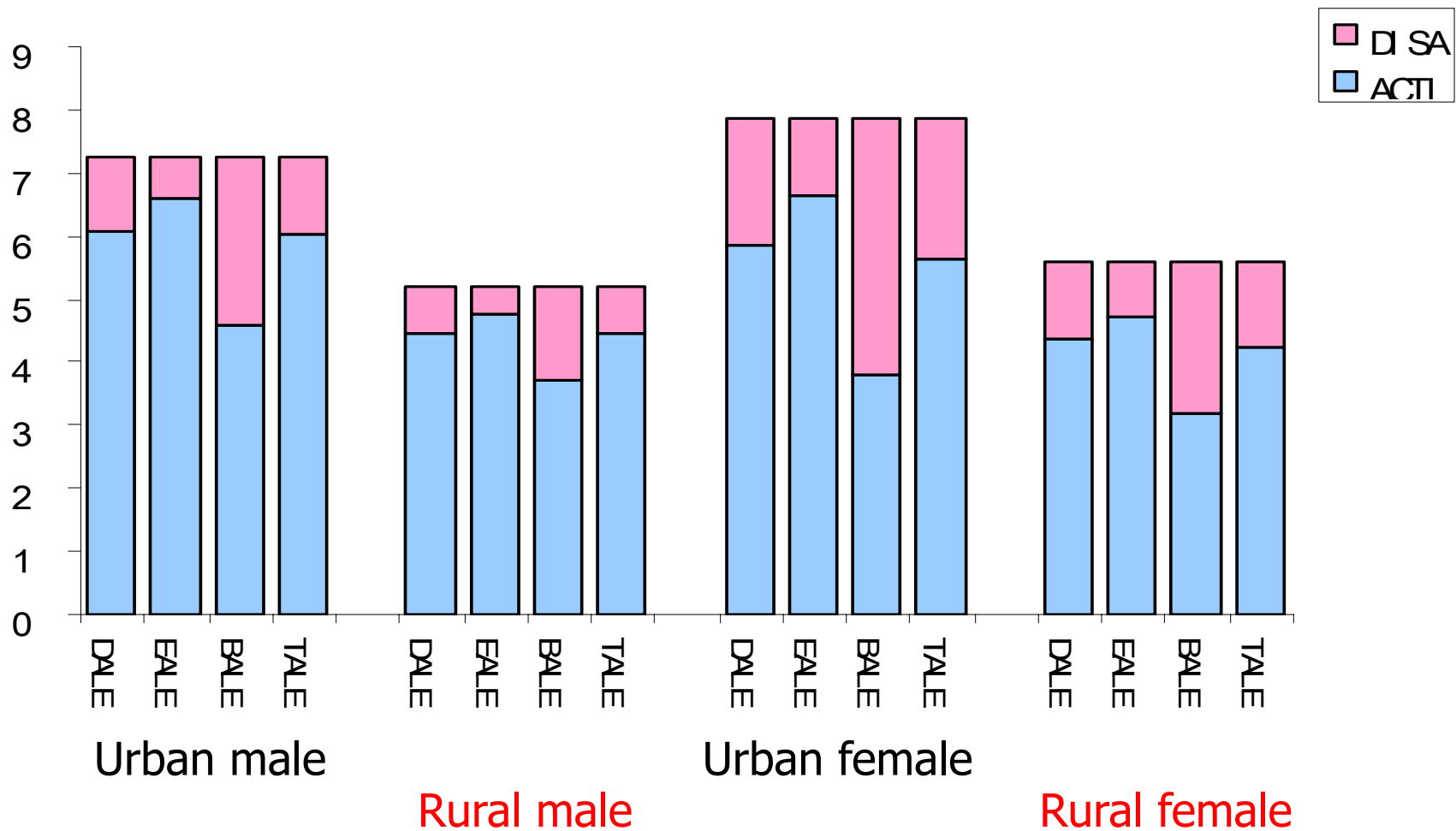
# Figure 5. Respective Active Life Expectancy (Urban and Rural at 65)



Rural male

Rural female

# Figure 6. Respective Active Life Expectancy (Urban and Rural at 85)

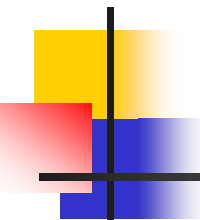


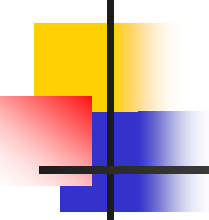


# Conclusions

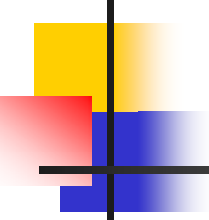
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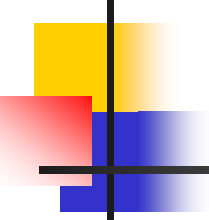
- Although the active life expectancy (ALE) is higher for females than for males in China, the proportion of active duration ( $ALE/LE$ ) is lower for females than for males.

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- Although the active life expectancy (ALE) is higher for urban residents than for rural residents, the proportion of active duration ( $ALE/LE$ ) is lower for urban residents than for rural residents.

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- Starting from longer active duration, the ranking order of the four ADLs is that of eating, dressing, toileting and bathing. Thus bathing is the greatest difficulty for elderly.
  - For women toileting is more difficulty than dressing, but for men there are not marked differences.



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- The active life expectancies of the four ADLs are higher for females than for males at age 65, but the proportions (/LE) are lower for females than for males.
  - However, both the durations and proportions are lower for females than for males at age 85.

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- We should pay more attention to old urban females. Although urban females have the highest active life expectancy, they tend to have the lowest proportion of active duration.



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**Thank you**