

Changes and Explanations of Perceived Health Expectancies of Chinese Elderly



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Motivation

Theoretical review

- Compression of Morbidity

- Expansion of Morbidity

- Dynamic Equilibrium

A previous finding

- Compression and expansion happened to one population but by different age groups

Objectives

Try to test if the age-specific expression and expansion happened by comparing the changes of perceived health expectancies from 1987, 1992, to 2000.

Try to explain the causes provoking the changes

Data and Method

Data from three nationally cross-sectional sampling surveys for Chinese elderly aged 60+ are used, that is,

1. Conducted by the China Social Science Academy in 1987, with 37,000 elderly samples
2. Conducted by the China Research Center on Aging in January 1, 1992, with 20,000 elderly samples
3. Also conducted by the China Research Center on Aging in December 1, 2000, with 20,000 elderly samples

The Sullivan method is used for calculation

Definition of Perceived Health

The questions asked for perceived health status in three surveys were of little difference

In 1987 survey, there were five choices: very good, good, fair, bad, very bad. Very good, good and fair = healthy

In 1992 survey, There were three fixed choices: healthy, fair, and not healthy. Healthy and fair = healthy

In 2000 survey, there were five possible answers: very bad, bad, fair, good, and very good. Fair, good, and very good = healthy

Results

Proportions with Healthy Status (s. e.) for Males (%)

Age	1987年	1992年	2000年
60-64	76.72 (0.50)	84.96 (0.64)	83.99 (0.62)
65-69	74.78 (0.64)	81.57 (0.74)	80.10 (0.72)
70-74	73.87 (0.80)	78.08 (0.94)	77.18 (0.89)
75-79	72.36 (1.13)	76.20 (1.28)	70.31 (1.30)
80-84	76.00 (1.64)	77.12 (1.96)	68.80 (2.01)
85-89	82.41 (2.70)	71.22 (3.84)	68.55 (3.68)
90+	85.42 (5.09)	87.50 (6.75)	80.00 (5.96)

Results

Proportions with Healthy Status (s. e.) for Females (%)

Age	1987	1992	2000
60-64	69.22 (0.57)	79.30 (0.69)	78.82 (0.80)
65-69	68.80 (0.66)	77.69 (0.79)	74.44 (0.85)
70-74	70.37 (0.76)	75.31 (0.96)	68.48 (1.04)
75-79	72.34 (0.92)	72.33 (1.25)	63.40 (1.34)
80-84	75.30 (1.23)	73.62 (1.75)	61.43 (1.88)
85-89	77.54 (2.05)	72.36 (2.85)	64.53 (2.94)
90+	88.62 (2.86)	68.85 (5.93)	65.63 (5.94)

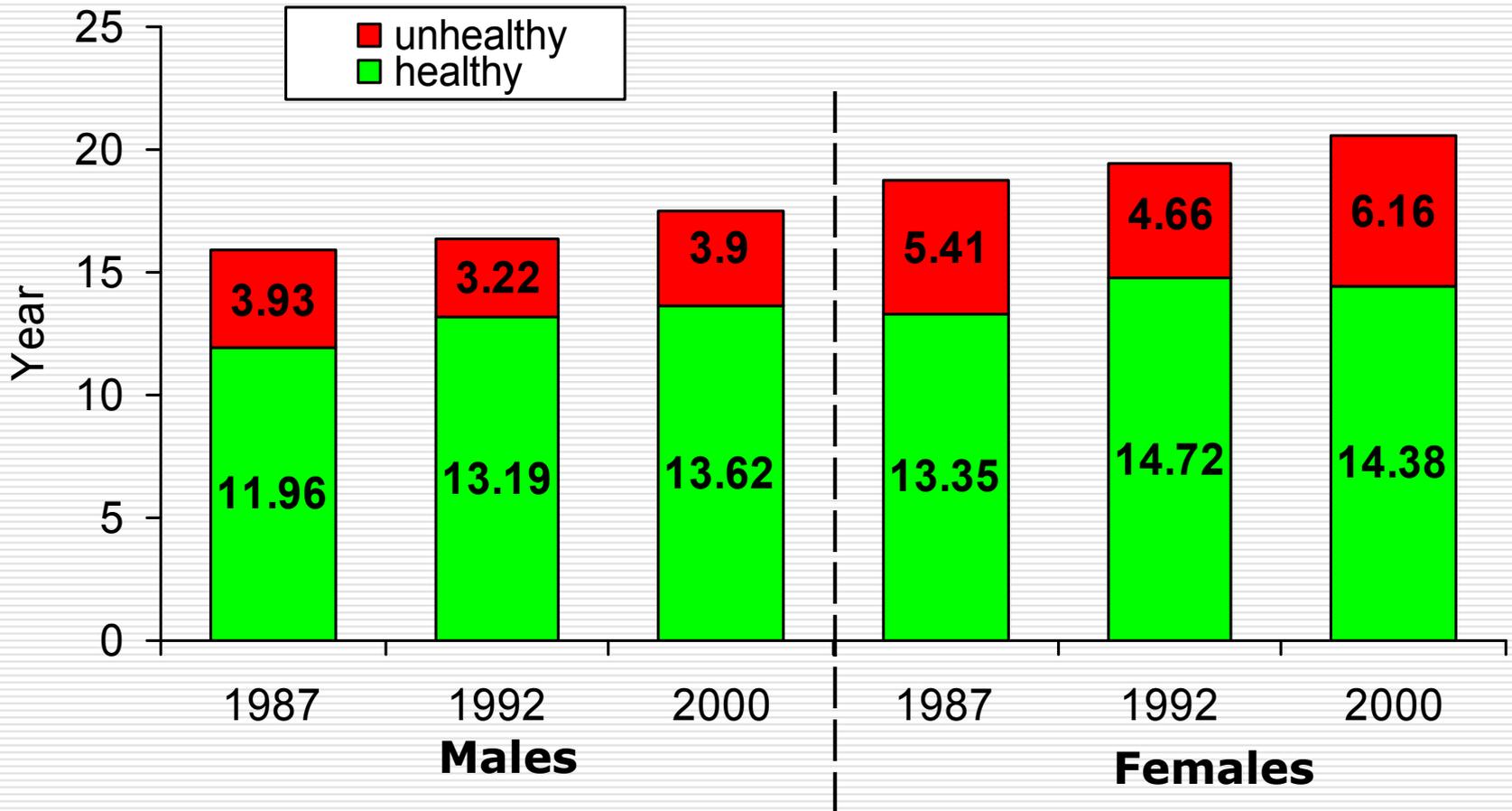
Comparison of PHE between 1987 and 1992, Males and Females

Age	1987HE(se)	1992HE(se)	HE92- HE87	z-value	p-value
Males					
60	12.0(.042)	13.2(.055)	1.2	12.64	0.0000
65	9.4(.042)	10.2(.055)	0.8	8.62	0.0000
70	7.3(.044)	7.8(.057)	0.4	4.34	0.0000
75	5.6(.049)	5.9(.063)	0.3	2.67	0.0076
80	4.3(.059)	4.4(.077)	0.1	0.41	0.6810
85	3.4(.082)	3.2(.110)	-0.2	-1.22	0.2235
Females					
60	13.4(.045)	14.7(.065)	1.4	12.31	0.0000
65	10.8(.044)	11.7(.064)	0.9	7.96	0.0000
70	8.6(.044)	9.0(.064)	0.4	3.80	0.0001
75	6.7(.046)	6.8(.068)	0.2	1.46	0.1437
80	5.0(.050)	5.1(.077)	0.1	0.79	0.4306

Comparison of PHE between 1992 and 2000, Males and Females

Age	1992HE(se)	2000HE(se)	HE00- HE92	z-value	p-value
Males					
60	13.2(.055)	13.6(.057)	0.43	3.83	0.0001
65	10.2(.055)	10.5(.056)	0.26	2.33	0.0199
70	7.8(.057)	7.9(.056)	0.08	0.68	0.4982
75	5.9(.063)	5.7(.061)	-0.17	-1.34	0.1799
80	4.4(.077)	4.2(.072)	-0.20	-1.35	0.1778
85	3.2(.110)	3.2(.100)	0.01	0.06	0.9498
Females					
60	14.7(.065)	14.4(.069)	-0.34	-2.51	0.0120
65	11.7(.064)	11.2(.066)	-0.49	-3.78	0.0002
70	9.0(.064)	8.4(.065)	-0.61	-4.71	0.0000
75	6.8(.068)	6.2(.066)	-0.65	-4.83	0.0000
80	5.1(.077)	4.5(.072)	-0.64	-4.33	0.0000

Healthy and Unhealthy Life Expectancies at Age 60

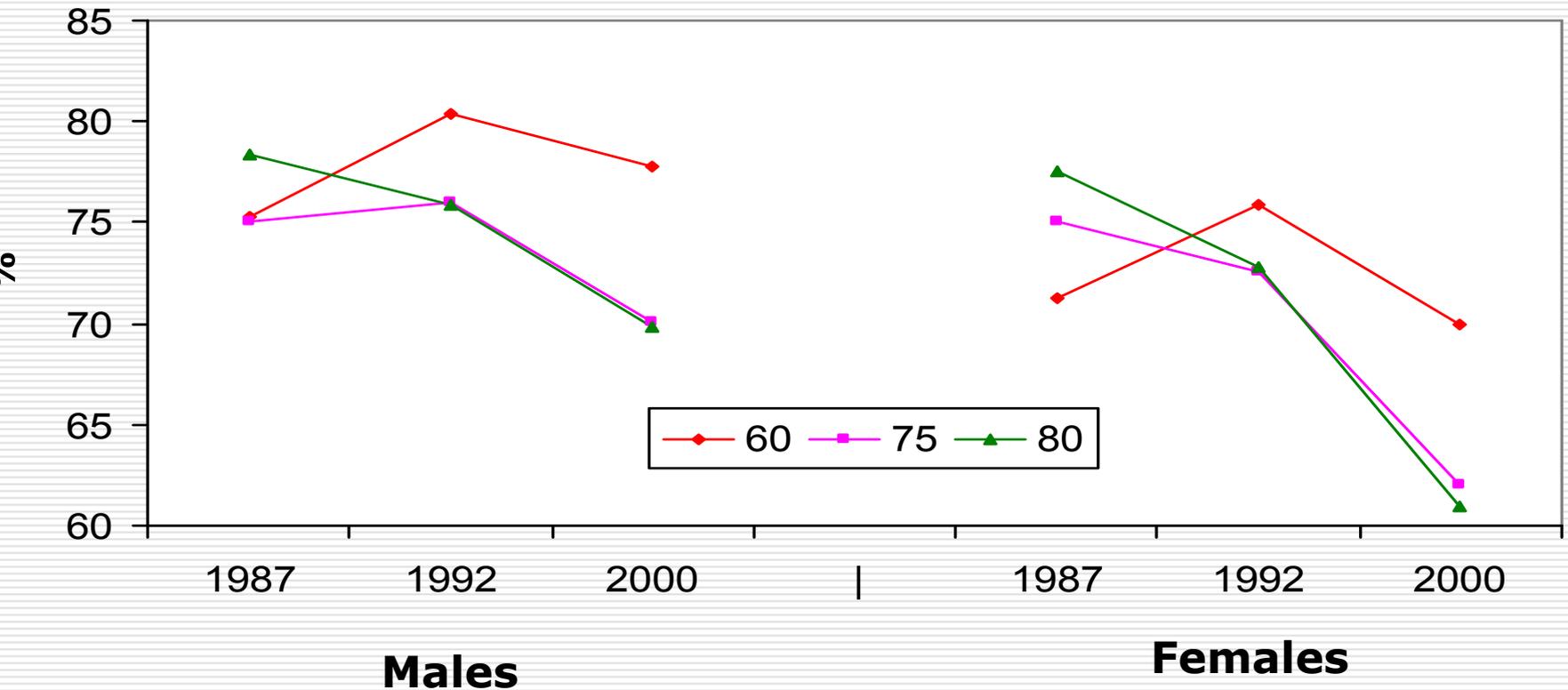


Proportions and Changes of PHE/LE, 1987, 1992, and 2000 (%)

Age	Males					Females				
	1987	1992	2000	92-87	00-92	1987	1992	2000	92-87	00-92
60	75.3	80.4	77.8	5.1	-2.6	71.2	75.9	70.0	4.8	-6.0
65	74.6	78.6	75.4	3.9	-3.1	71.8	74.8	67.2	3.0	-7.6
70	74.6	76.9	73.1	2.3	-3.9	73.2	73.6	64.3	0.3	-9.3
75	75.1	76.0	70.1	0.9	-5.9	75.0	72.6	62.0	-2.5	-10.6
80	78.4	75.9	69.8	-2.3	-6.0	77.5	72.8	60.9	-4.8	-11.9
85	83.1	73.6	71.6	-9.5	-2.1	80.8	71.7	60.0	-9.2	-11.6

Compression and Expansion of Morbidity

Changes of Proportions of PHE/LE by age 60, 75, and 80



Note: Upward = Compression; Downward = Expansion

In Brief

Compression and expansion of morbidity happened at same time and same population, but compression in lower ages and expansion in higher ages from 1987 to 1992

Sharp expansion appeared from 1992 to 2000. Why?

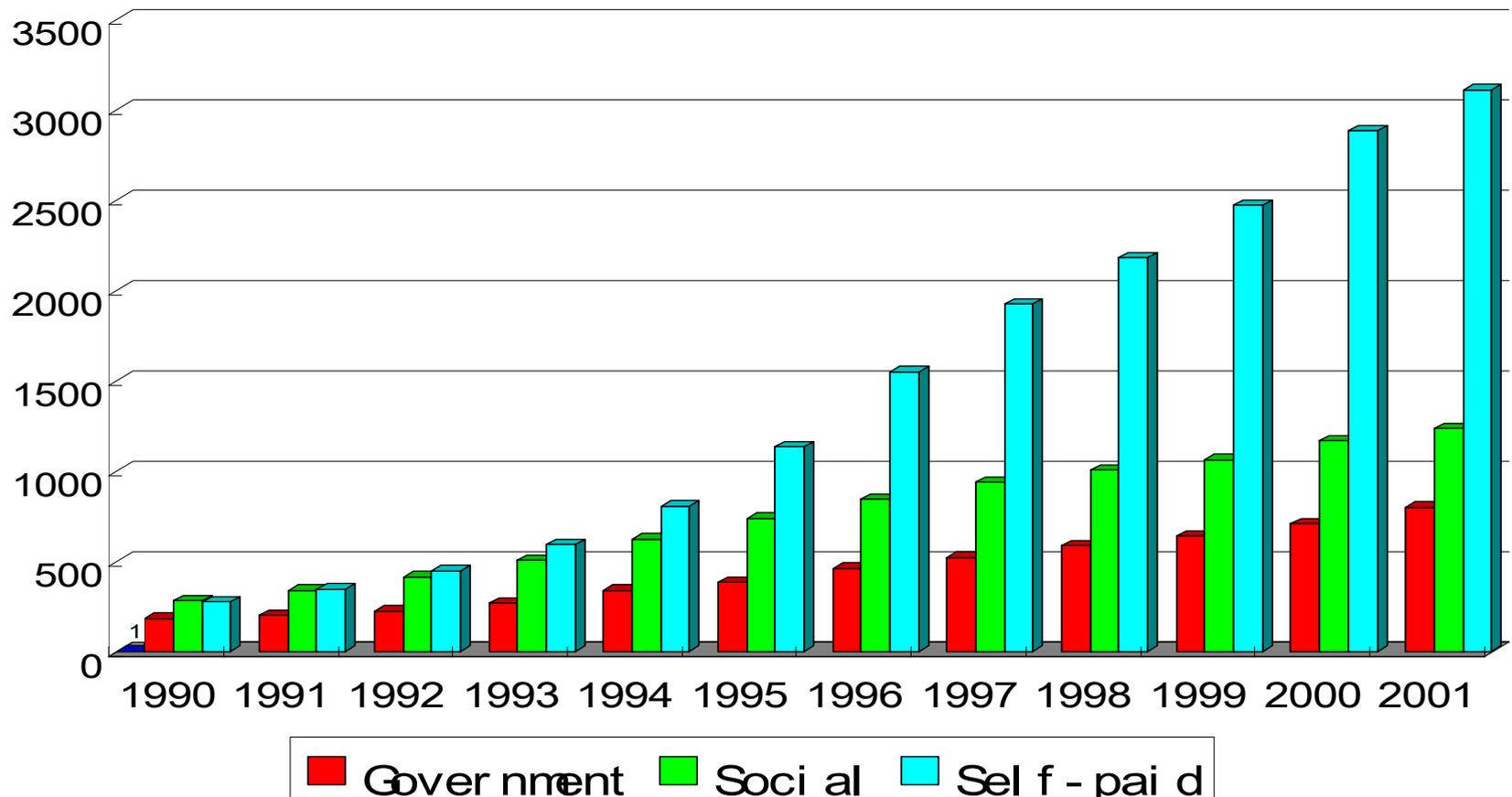
Cause of Expansion of Morbidity

Chinese people were benefited from the traditional institution of Public Health Services, especially in urban areas, before 1990

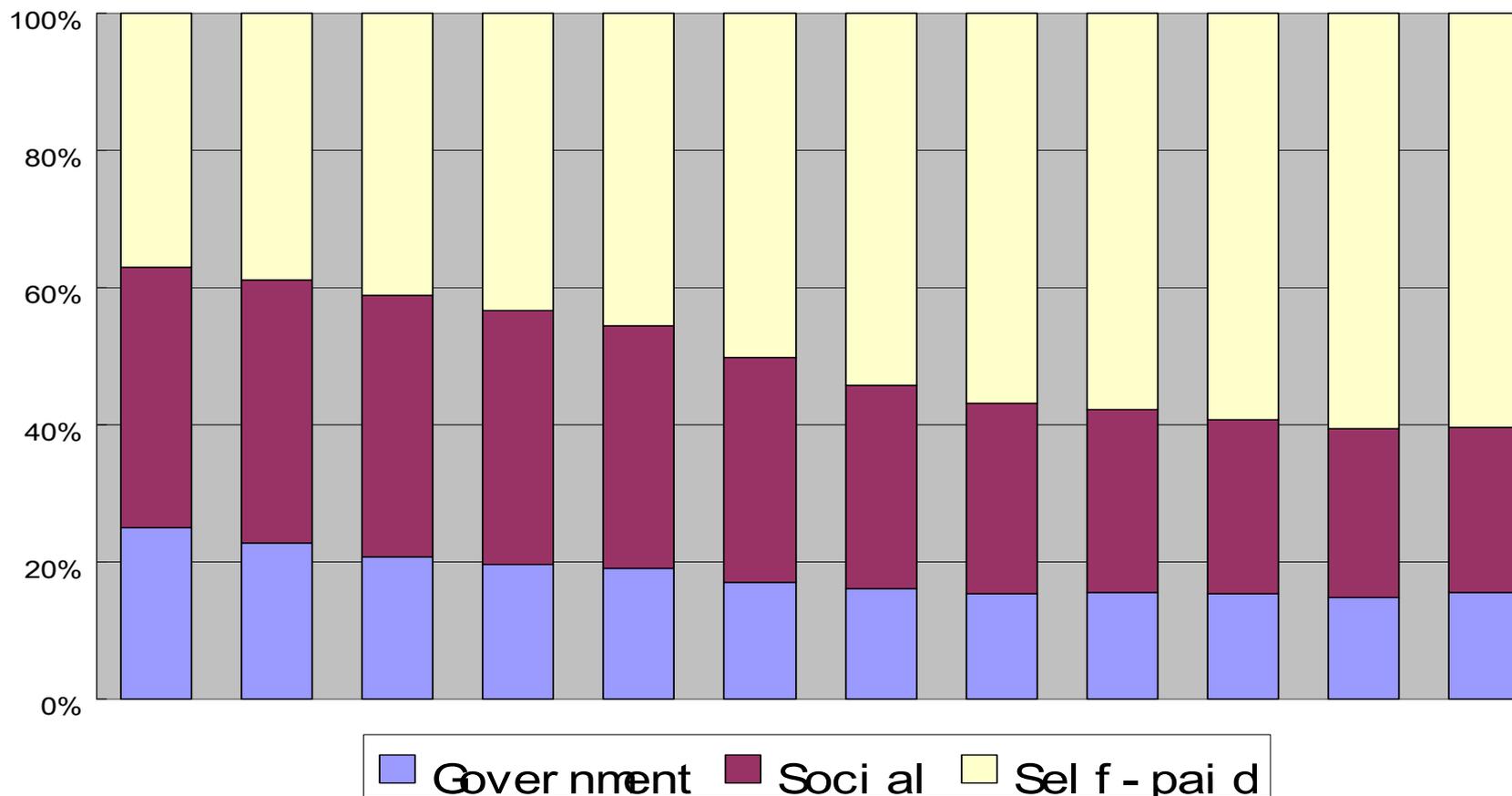
The reform of the institution of Public Health Services started in the early 1990s

The tendency for the reform is that the medical payment from the government would be gradually removed, and people should take their own responsibility for the medical expenses.

Medical Expenditures in China (100 Billion), 1990-2001



The Composition of the Expenditure 1990-2001



Consequences to the Elderly

Such reform affected the elderly substantially, because the elderly earned less for income and paid more for medicine than young and middle-aged people

As the perceived health expectancies reflected the subjective response from the elderly, the results, at least, implied the negative mood of the elderly in dealing with the reform.

They paid more attention on their health status than before, which led to negative feelings and showed signs of worry in their health status.

A Social Evidence

Fa Lun Gong was just rising at the beginning of the reform in the early 1990s. One of famous words to the exercisers was that the exercise would be no effect if you had medicine.

This really met the needs of old people at that time who were ill and no money for medicine.

That is why most of the Fa Lun Gong exercisers were the aged.

Conclusions

We found the expansion of morbidity in Chinese elderly from 1992 to 2000 by using the perceived health expectancy.

As the PHE is the subjective assessment to the health status of the elderly, We have no evidence to prove that the objective health of Chinese elderly was also worsening under the situation of the increase of LE in 1990s.

As we used the Sullivan method which just reflects the changes of prevalence, multi-state model is worth being used for further exploring.

THANK YOU