

# Urban Health Index Project in Shanghai

Hua Fu, Junling Gao, Junming Dai, Jiang Li, Meiyin Zhu  
Fudan School of Public Health  
Songjiang Center for Diseases Prevention and Control, Shanghai

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**Health problems from the urbanization**

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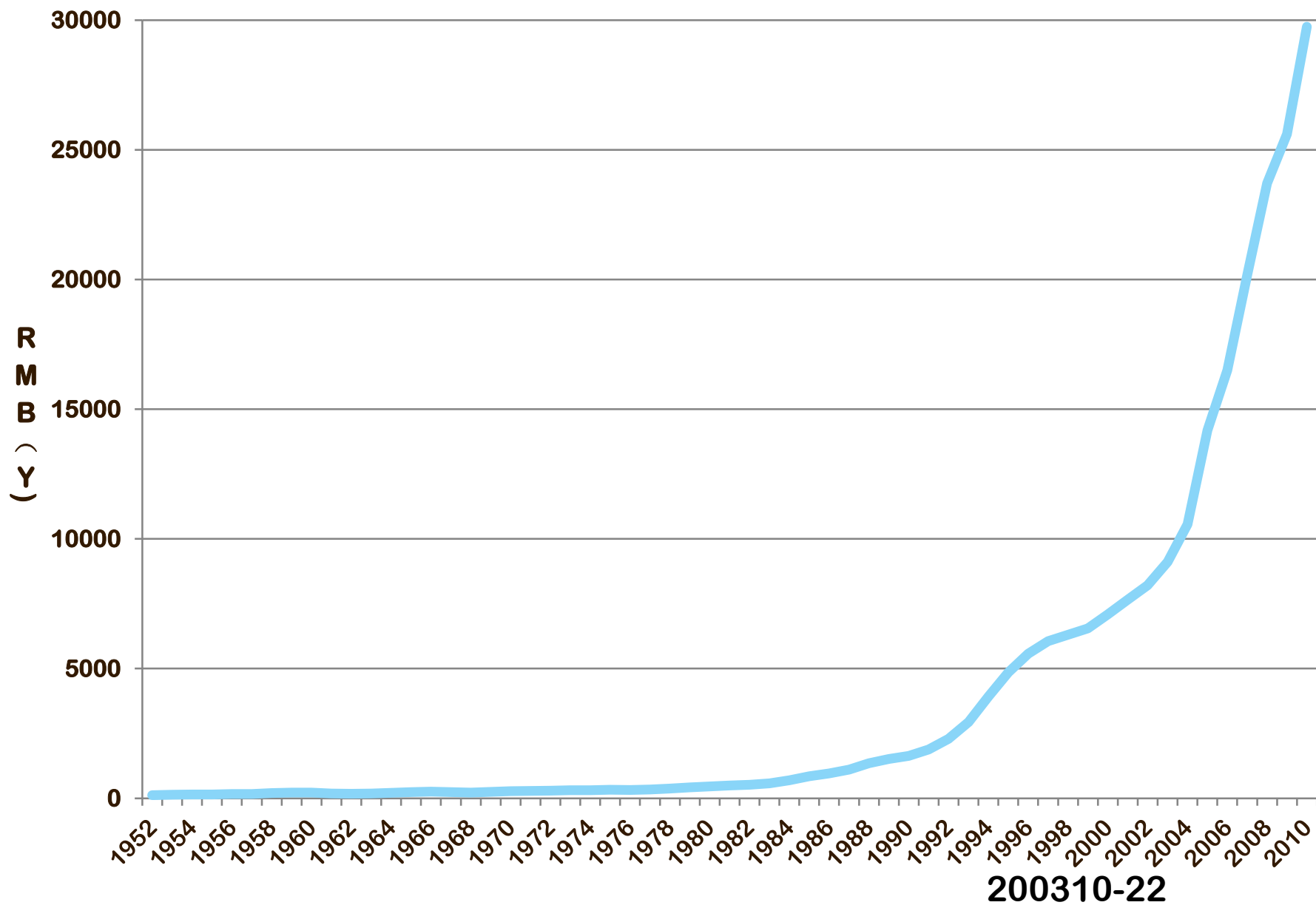


**A pilot study Urban Health Index In Songjiang District of Shanghai**

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# Health related problems with the urbanization in China

# Trend of Capital GDP in China from 1952 to 2010



# Health related problems with the urbanization and globalization



家庭暴力



交通事故



艾滋病



肥胖



老龄化





# Health related problems with the urbanization and globalization



光污染



装修/电磁污染



空气污染



未经处理的城市  
污水直接排入清  
澈的嫩江上游



交通拥堵



居住拥挤/简陋





# Marketing

They work on our 'desire





# Health related problems with the urbanization and globalization



抑郁



流动人口



就业压力



饮酒



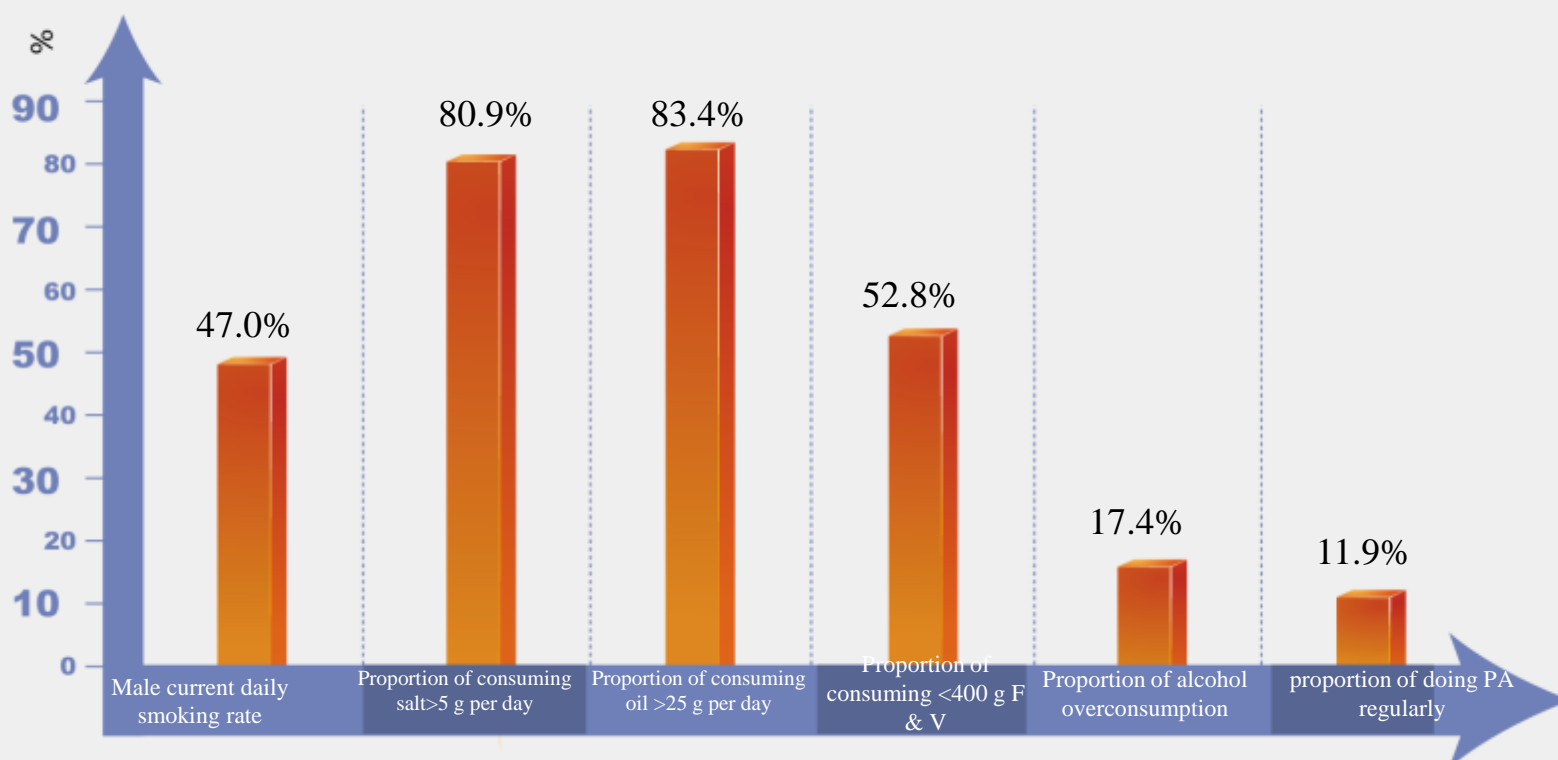
吸烟/吸毒





# Challenges: Behavioral Risk Factors of NCDs

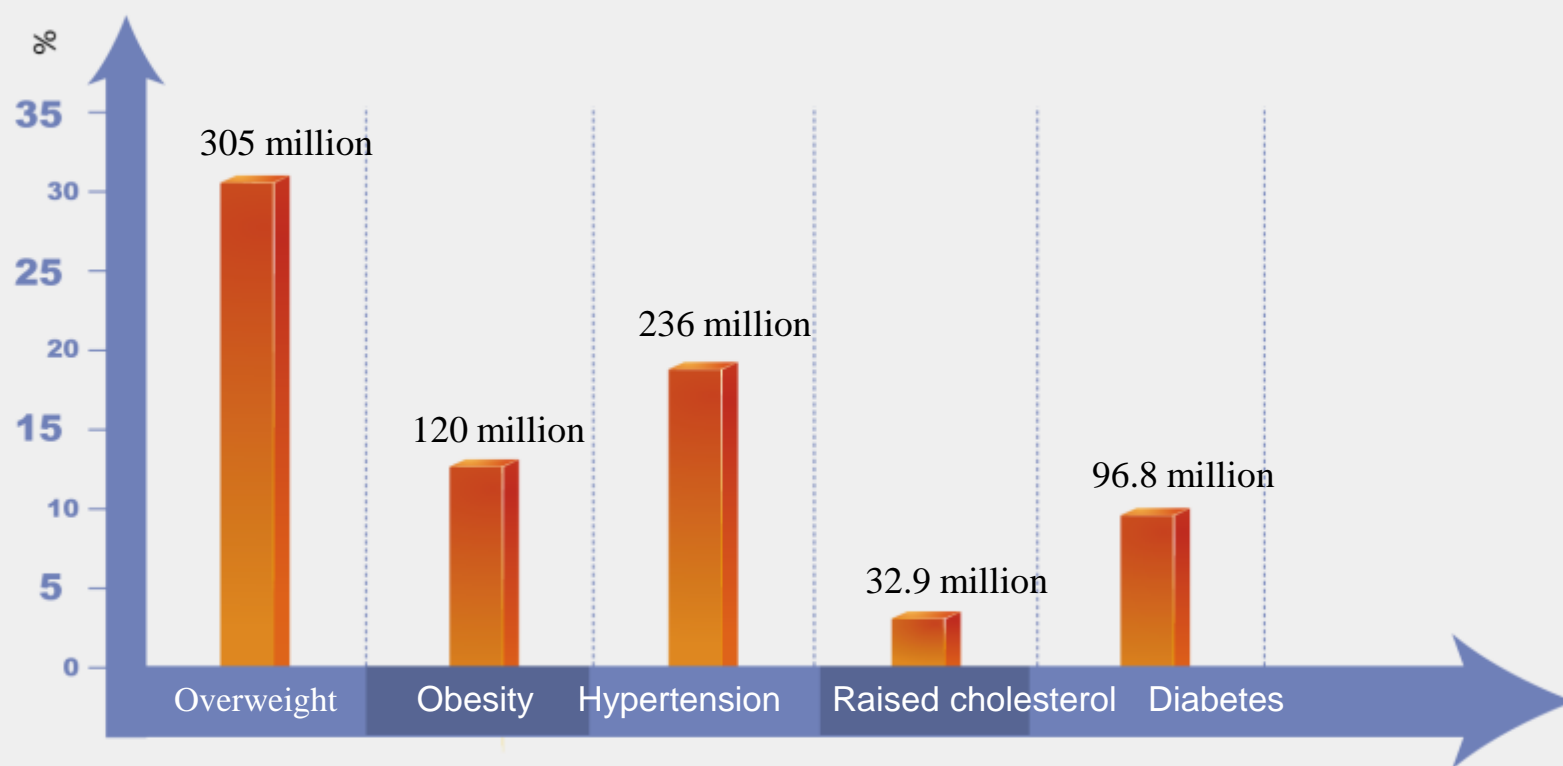
## Behavioral Risk Factors of NCDs among 18-year-old and above



Source : 2010 PRC BRFSS

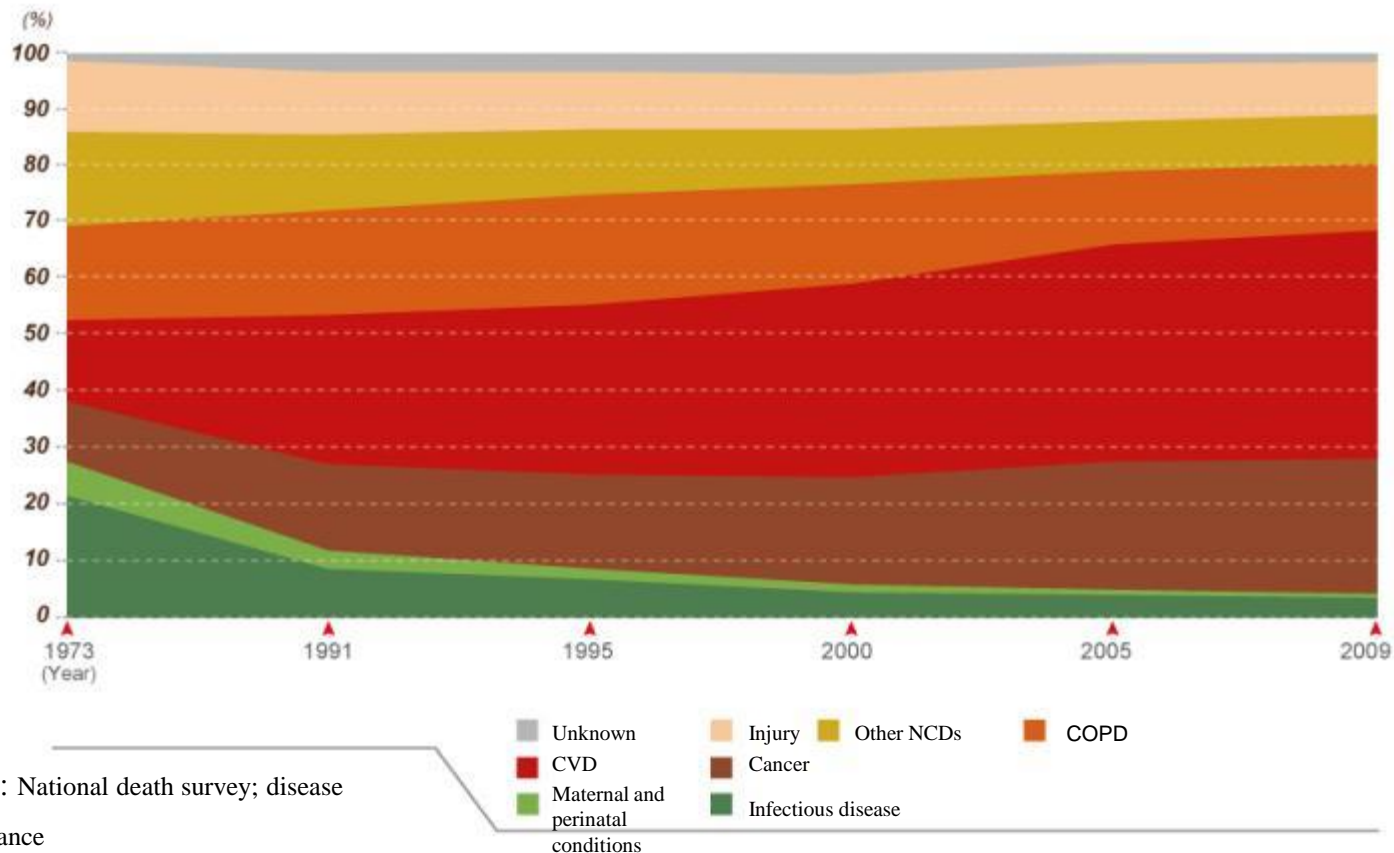
Doing physical activity regularly: doing recreational physical activity at least 3 times a week, and at least 10 minutes per time.

# Challenges: Prevalence of NCDs



Source : 2010 China Annual Cardiovascular Report ( Hypertension ) ;  
2010 PRC BRFSS ( Overweight、 Obesity、 Raised cholesterol、 Diabetes ) 。

# Trend Change of Prevalence of Major NCDs in China



Source : National death survey; disease surveillance

**Cause of death in China , 1973-2009**

# Study on Disease Burdens and Health Policy

- The proportion of years of life lost resulting of patients living with diseases increased from 28% in 1990 to 39% in 2010.
- 77% of the burden rate of living with diseases occurs before the age of 60 and peaks at the age of 55-59.
- Diseases such as cardiovascular disease, lung cancer and liver cancer, road traffic injuries, mental illness (depression and anxiety), and musculoskeletal disease are the major burdens affecting the health of the Chinese populations.

## Studies in 1990

1. Lower respiratory infection
2. Stroke
3. Chronic obstructive pulmonary disease
4. Congenital anomalies
5. Drowning
6. neonatal encephalopathy
7. Ischemic heart disease
8. Self-mutilation
9. Complications of prematurity
10. Road injuries
11. Gastric cancer
12. Liver cancer

## Studies in 2010

1. Stroke
2. Ischemic heart disease
3. Chronic obstructive pulmonary disease
4. Road injuries
5. Lung cancer
6. Liver cancer
7. Gastric cancer
8. Self-mutilation
9. Lower respiratory infection
10. Esophageal cancer
11. Drowning
12. Congenital anomalies



Source: Study on disease burden and health policy of Yang Gonghuan, et al.

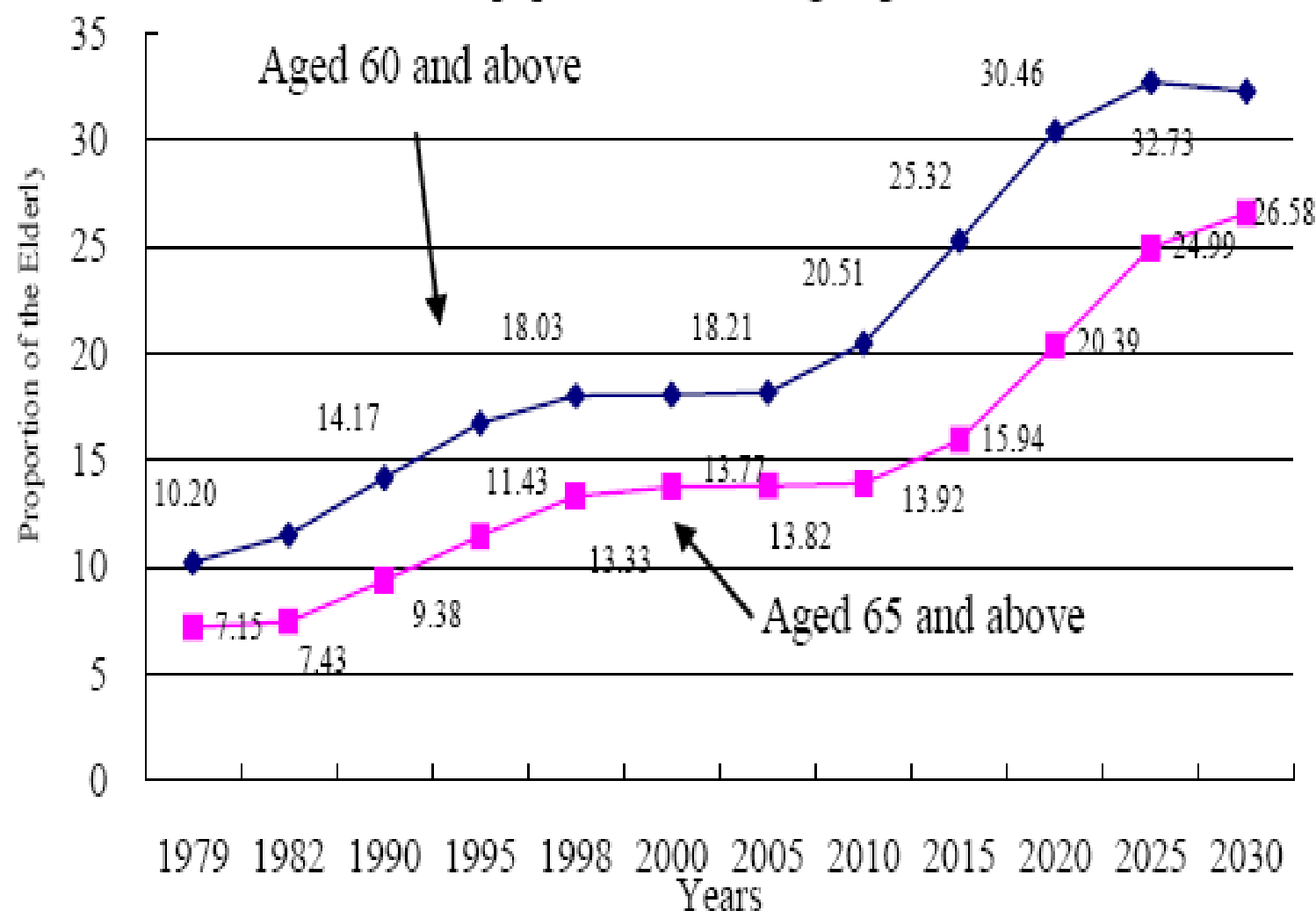


# Focused on Shanghai

# General information about Shanghai

- With a total area of 6,341 square kilometers and a resident population of more than 24.15 million (14.25 millions of registered population and 9.90 million of floating population), Shanghai is among the world's biggest and most booming urban areas.

**Figure 2: Ageing Process in Shanghai, 1979-2030**  
(Native population excluding migrants)

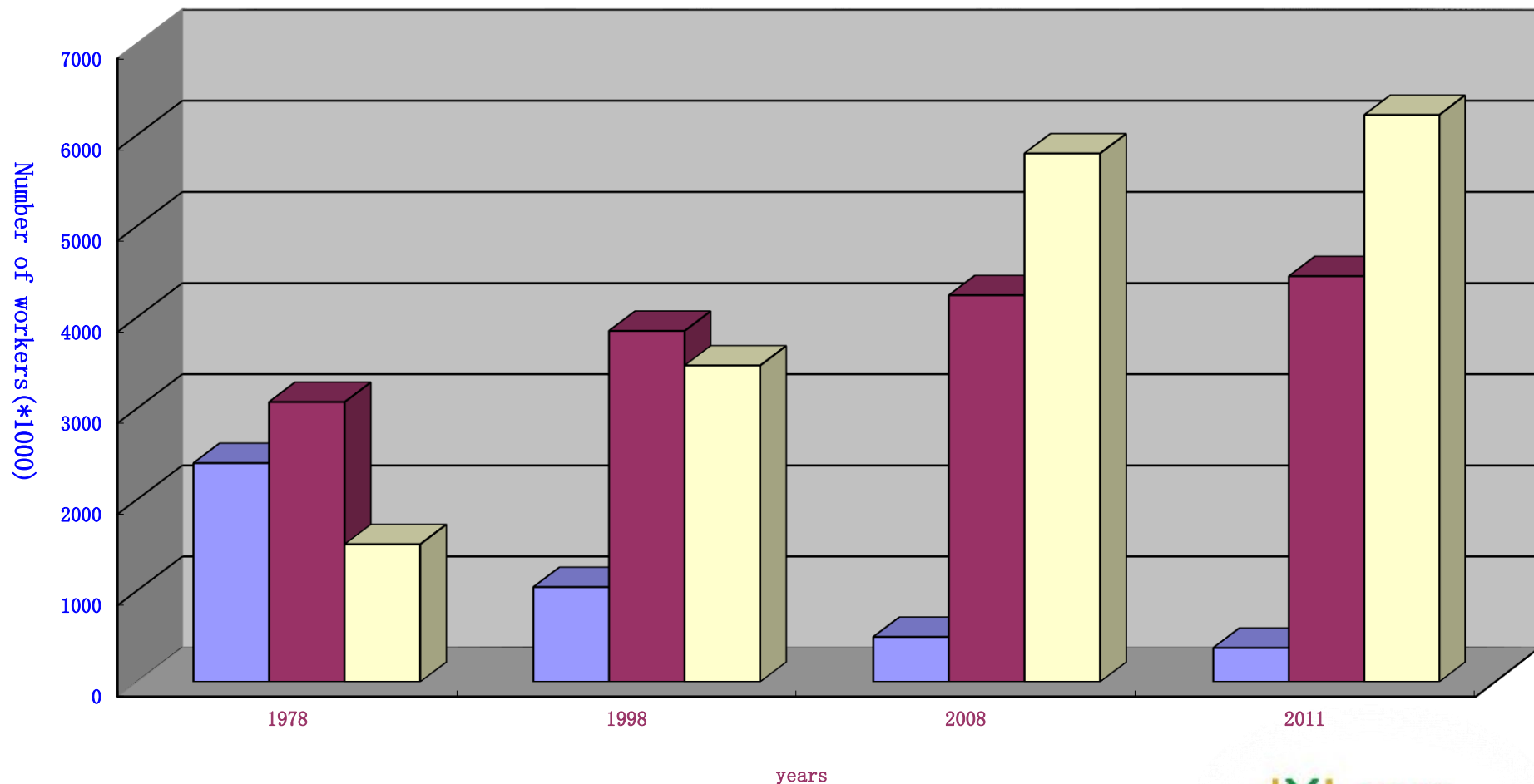


# General information about Shanghai

- Rapid development has markedly increased the city's economic strength leading to a constantly rising average per capita gross domestic product (GDP).
- In 1993, for the first time, Shanghai's per capita GDP exceeded US\$ 2,000 (according to the exchange rate for that year), then increased to US\$ 13,524 in 2013 after 20 years.

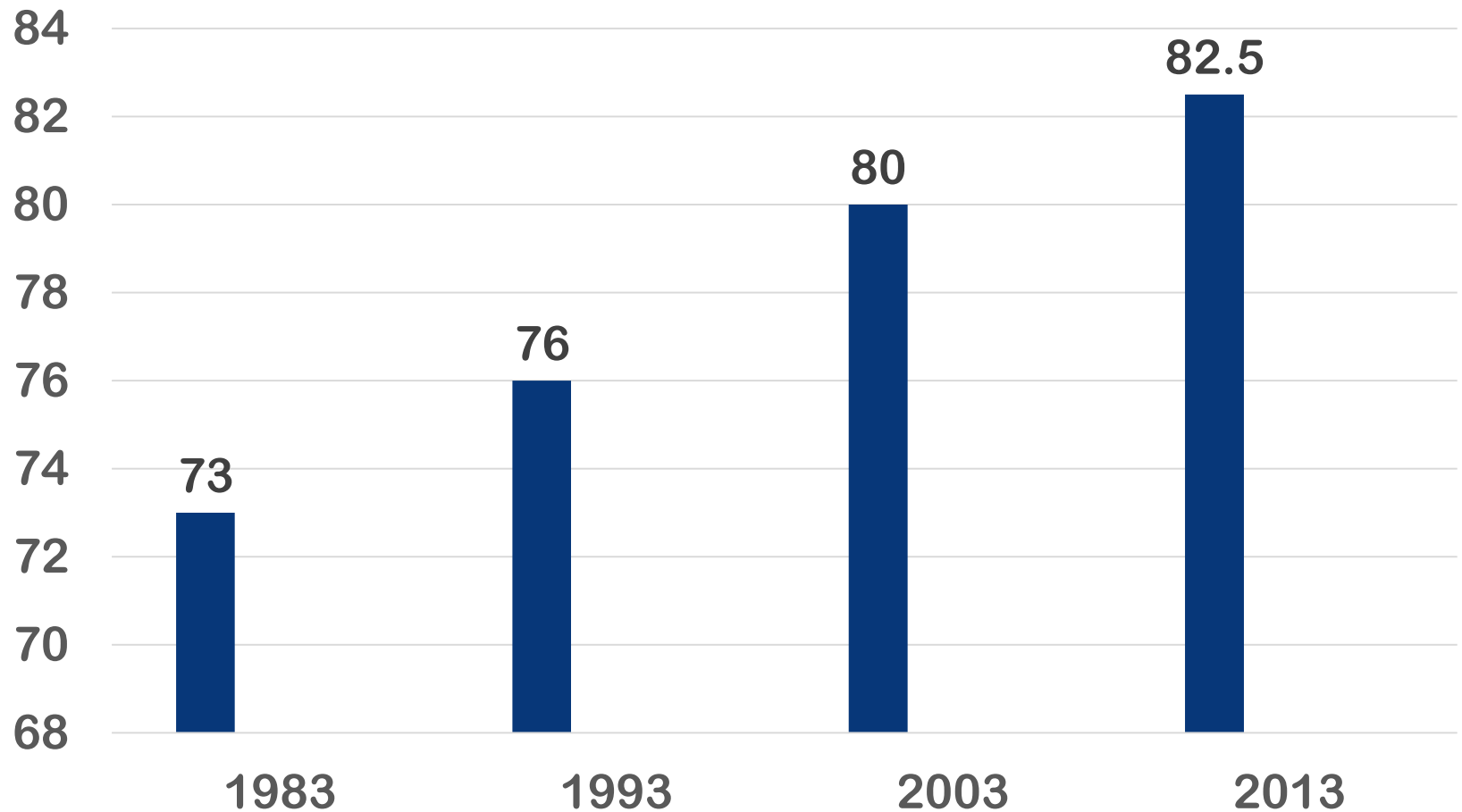


# Change of workers' number in three types of industries in Shanghai



■ First industry ■ Second industry □ Third industry

## Life expectancy from 1983–2013 in Shanghai



# The 5 leading causes of death and mortality per 100,000 for the urban areas of Shanghai 1950 – 2007

Rank	1950		1970		1990		2007	
	Cause	Rate	Cause	Rate	Cause	Rate	Cause	Rate
1	Contagious diseases	695.8	Diseases of the circulatory system	160.4	Diseases of the circulatory system	216.1	Diseases of the circulatory system	257.43
2	Diseases of the circulatory system	71.4	Tumours	125.3	Tumours	188.3	Tumours	227.52
3	Injure and poisoning	68.9	Respiratory diseases	46.5	Respiratory diseases	115.7	Respiratory diseases	86.73
4	Respiratory diseases	62.0	Injure and poisoning	40.9	Injure and poisoning	47.6	Injure and poisoning	41.71
5	Diseases of the digestive system	53.3	Contagious diseases	38.5	Disease of digestive system	26.0	Endocrine-Immunity-Metabolic Diseases	30.59

# A district in Shanghai: Background

As an economically developed suburb, Songjiang district is located in the southwest of Shanghai, 604.67 square kilometers in area.





# Soangjiang District

## 1、Demographic Characteristics

Songjiang district had a population of 1 582 400 in 2010, in which 576 000 were registered permanent resident and 1 006 400 were floating population.

Table.1 the demographic characteristics of Songjiang in 2001~2010

	2001	2005	2010
floating population (10000 persons)	10.12	52.94	100.64
resident population (10000 persons)	49.67	51.82	57.60
0~14 years old population ratio (%)	12.44	10.46	9.93
60 ages or older population ratio (%)	16.90	18.26	20.84
natality (‰)	6.45	7.01	7.37
mortality (‰)	6.87	6.96	6.73
natural growth rate (‰)	0.42	0.05	0.26
life expectancy (years)	78.36	79.76	81.95

# Soangjiang District

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## 2. Epidemic Trend of Disease and Risk Factor

As the result of the third national health service survey in 2003, the first five diseases of age specific two-week prevalence in city were acute upper respiratory tract infection(31.0‰), hypertension(28.8‰) , heart disease(17.2‰), diabetes mellitus(9.5‰) , cerebrovascular disease(7.0‰) .

# Soangjiang District

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The Songjiang survey results showed that the preceding ten chronic diseases, which accounted for 73.72% of the total number prevalence of chronic diseases, were hypertension(41.75%), diabetes mellitus, chronic obstructive pulmonary disease, heart disease, movement system disease, cholelithiasis and cholecystitis, other digestive tract diseases, chronic gastroenteritis, peptic ulcer, cerebrovascular disease.

# **Soangjiang District**

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**The top five rank order of causes of death in Songjiang, which accounted for 48.75% of the total mortality rate, were cerebrovascular disease, COPD, lung cancer, ischemic heart disease and traffic accident by the analysis of death data in 2002~2005. Based on the working years of potential life lost, the first five death causes were traffic accident, liver cancer, lung cancer, cerebrovascular disease and gastric cancer.**



# Soangjiang District

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**The rates of current smoking, drinking, overweight and obesity were 24.98% (56.29% in male and 0.79% in female), 11.27%, 24.20%, 4.40% by the Electronic Health Records survey of Songjiang in 2005.**

# Pilot Study of Urban Health Index In Shanghai

# Survey

- Community manager invited the selected numbers to the community meeting room.
- And the trained investigators interviewed them.



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# Survey

- 200 households were sampled randomly from 1987 households.
- One number of the selected household whose birthdate(month and day) was 01/01/01 were selected to be interviewed.



# Preliminary Results

- **Among the 200 subjects, There were:**
  - **5 uncompleted**
  - **3 younger than 18-years old**
  - **18 with missing information**
- **So data from 176 qualified subjects were analyzed.**

# 1. Characteristic of Subjects

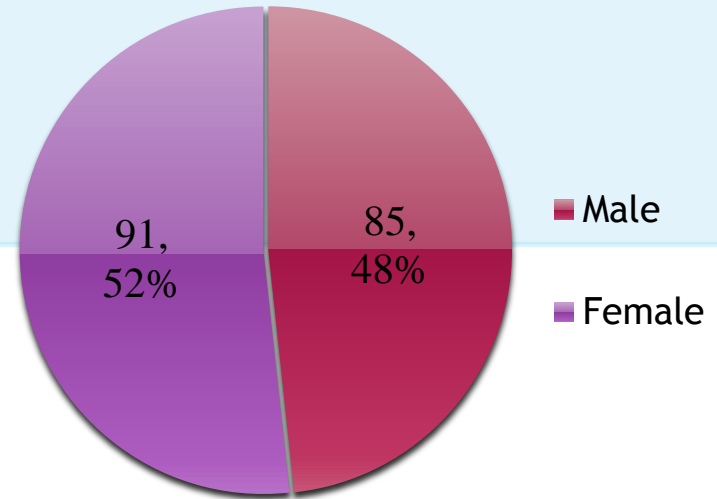


Figure 1 Gender distribution of subjects

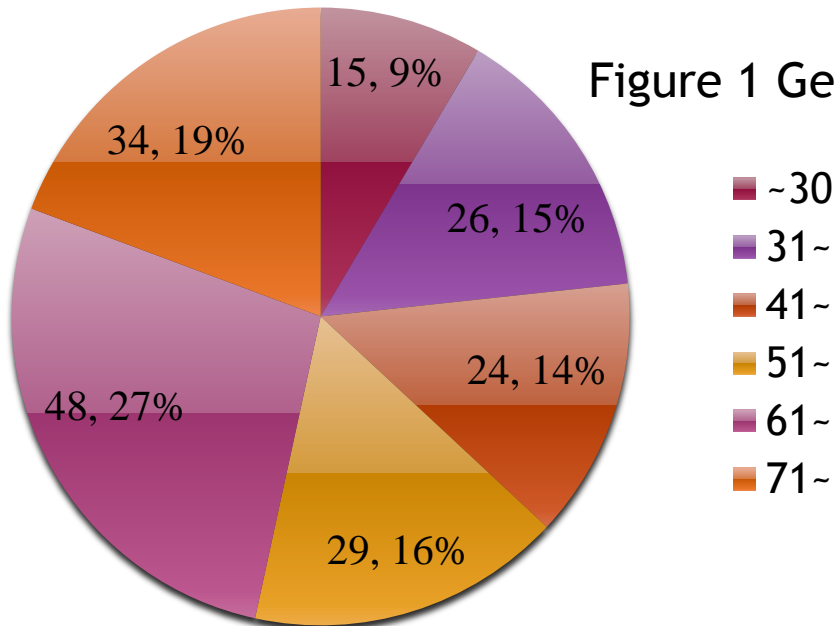


Figure 2 Age distribution of subjects



# 1. Characteristic of Subjects

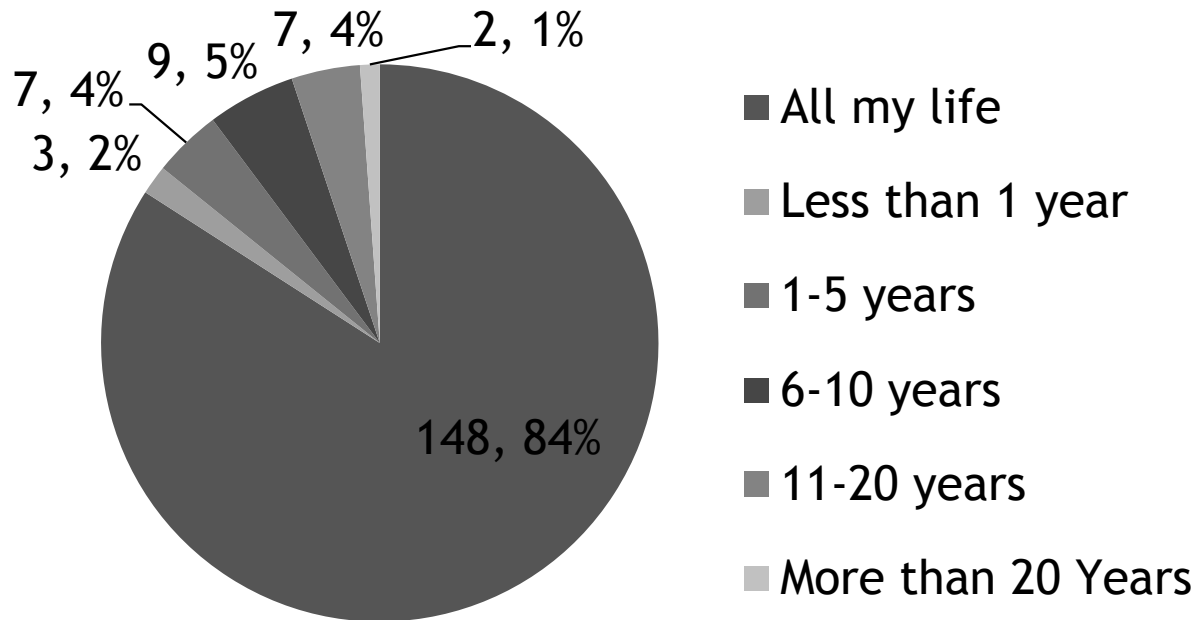


Figure 3 how many years are subjects living in Shanghai

# 1. Characteristic of Subjects

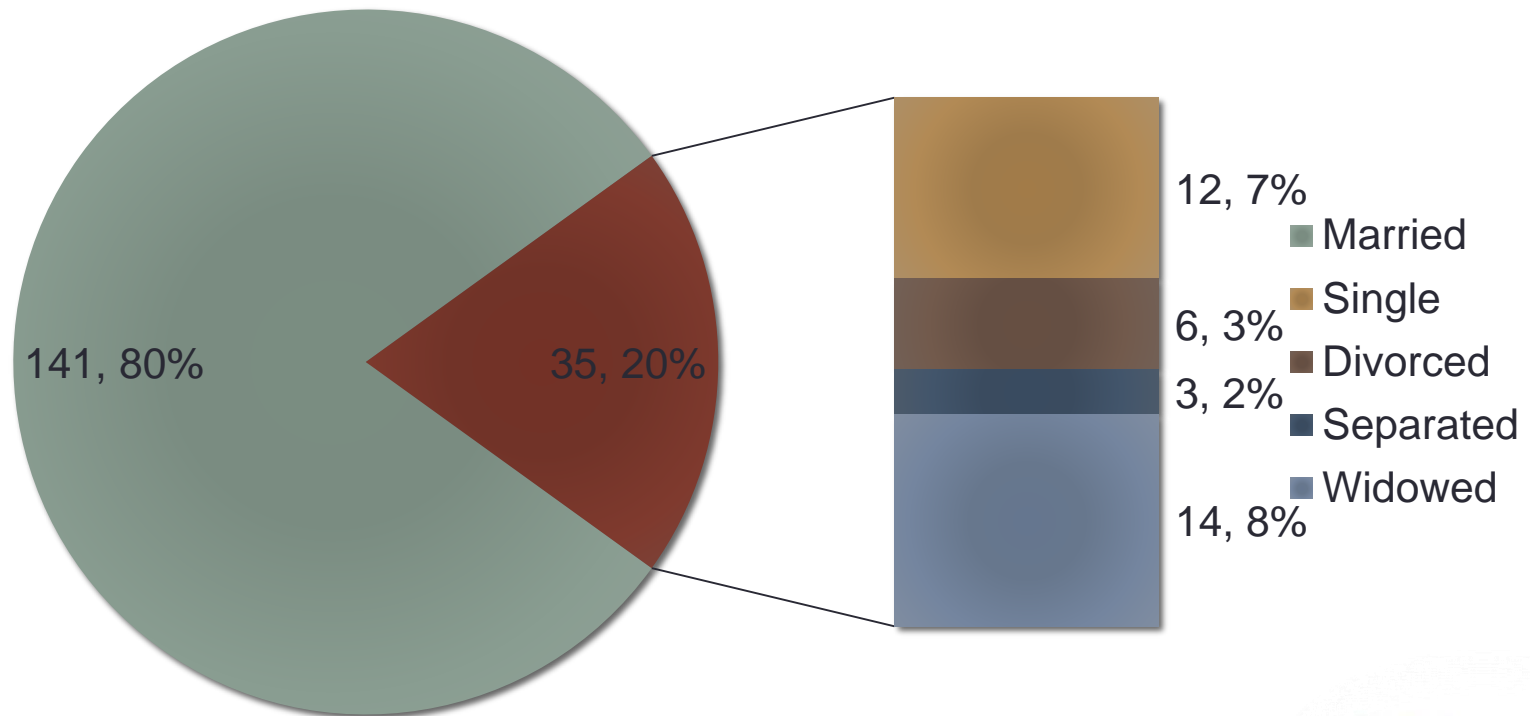


Figure 4 Marriage status of subjects living in Shanghai

# Family members

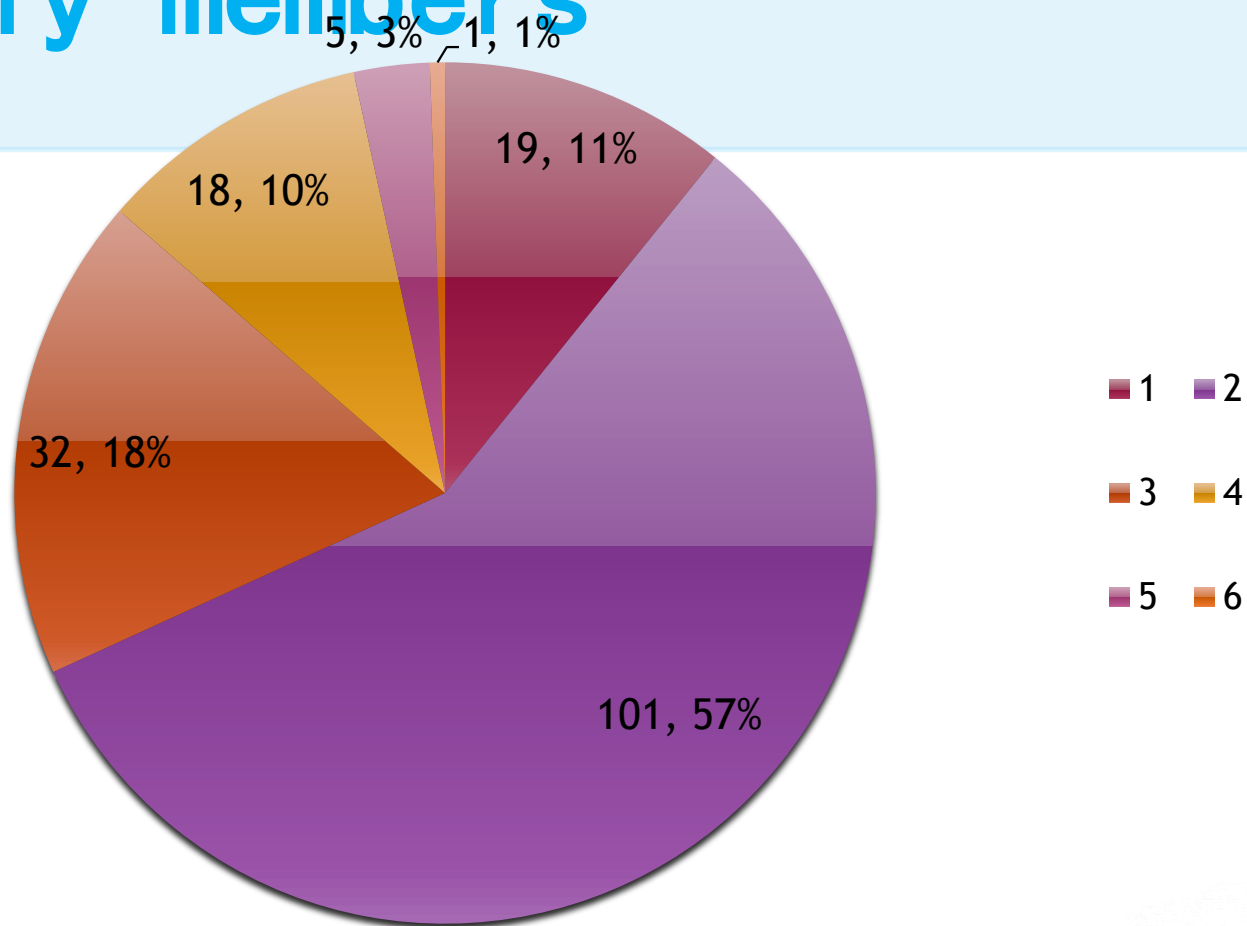
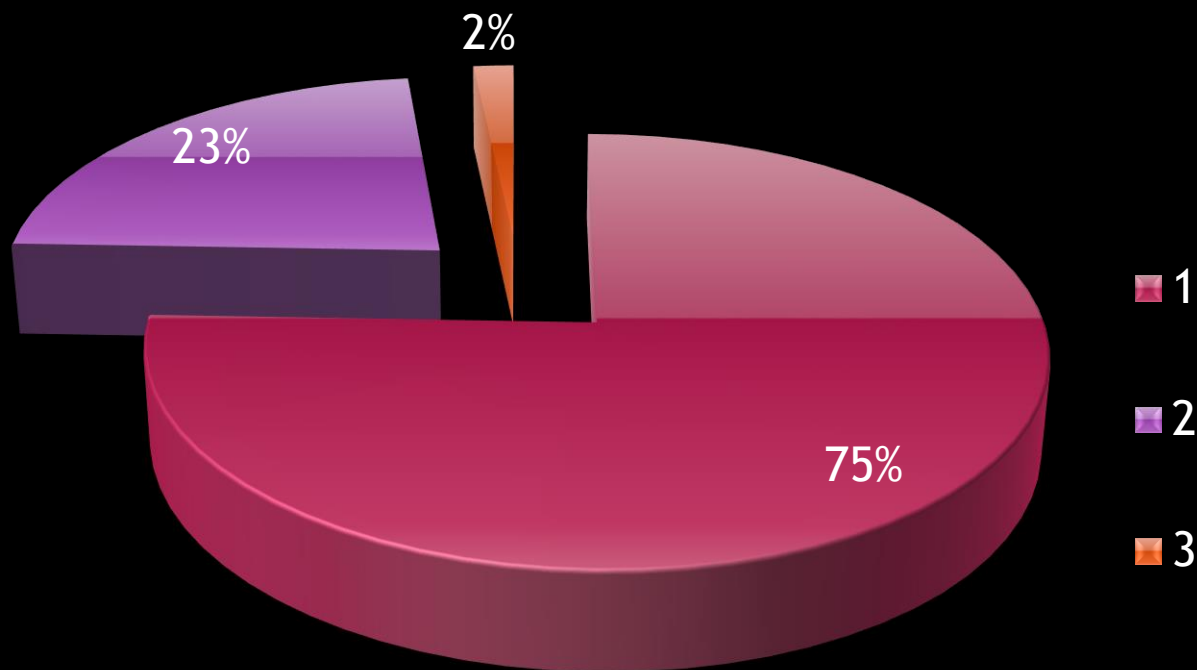


Figure 5 adult numbers of a family living in Shanghai

# Family members

Figure 6 teenager number of a family



# Educational attainments

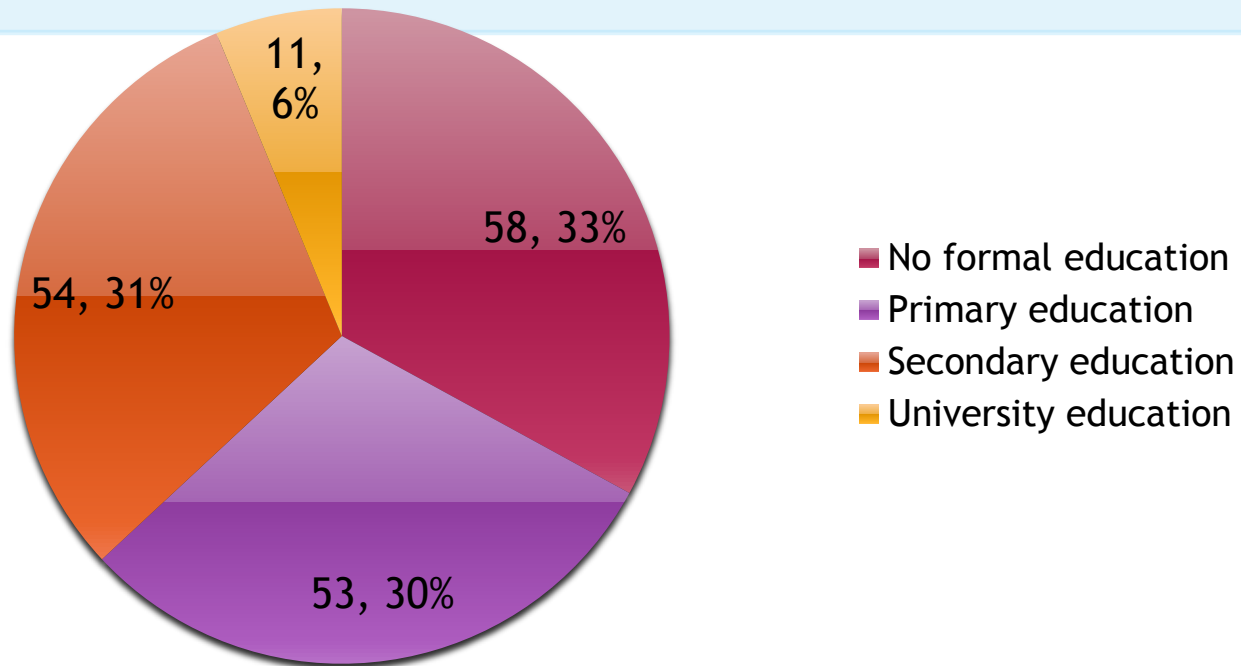


Figure 7 educational attainments of subjects in Shanghai

## 2. Health Status of Subjects

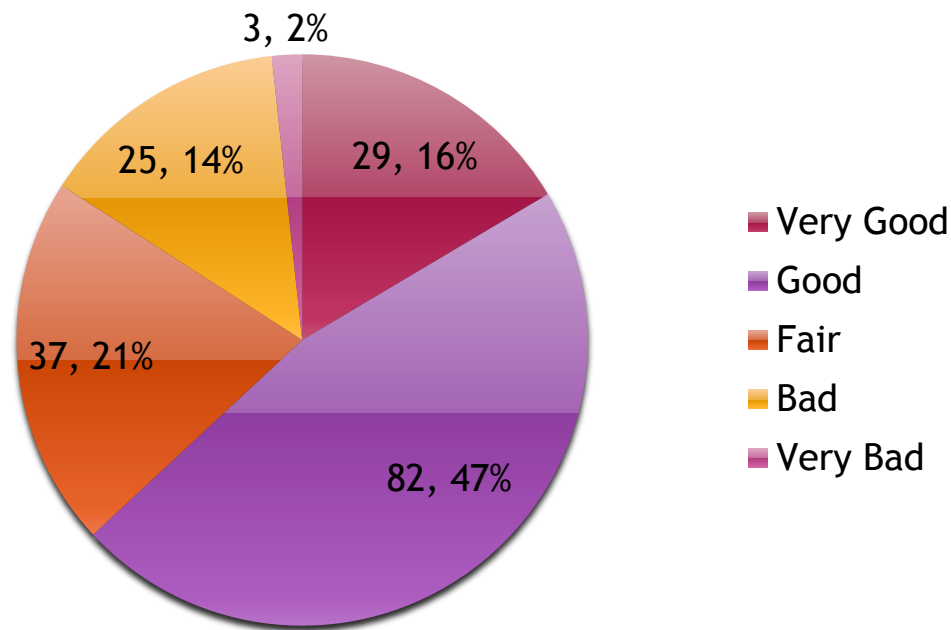


Figure 8 Self-reported health of subjects in Shanghai



## 2. Health Status of Subjects

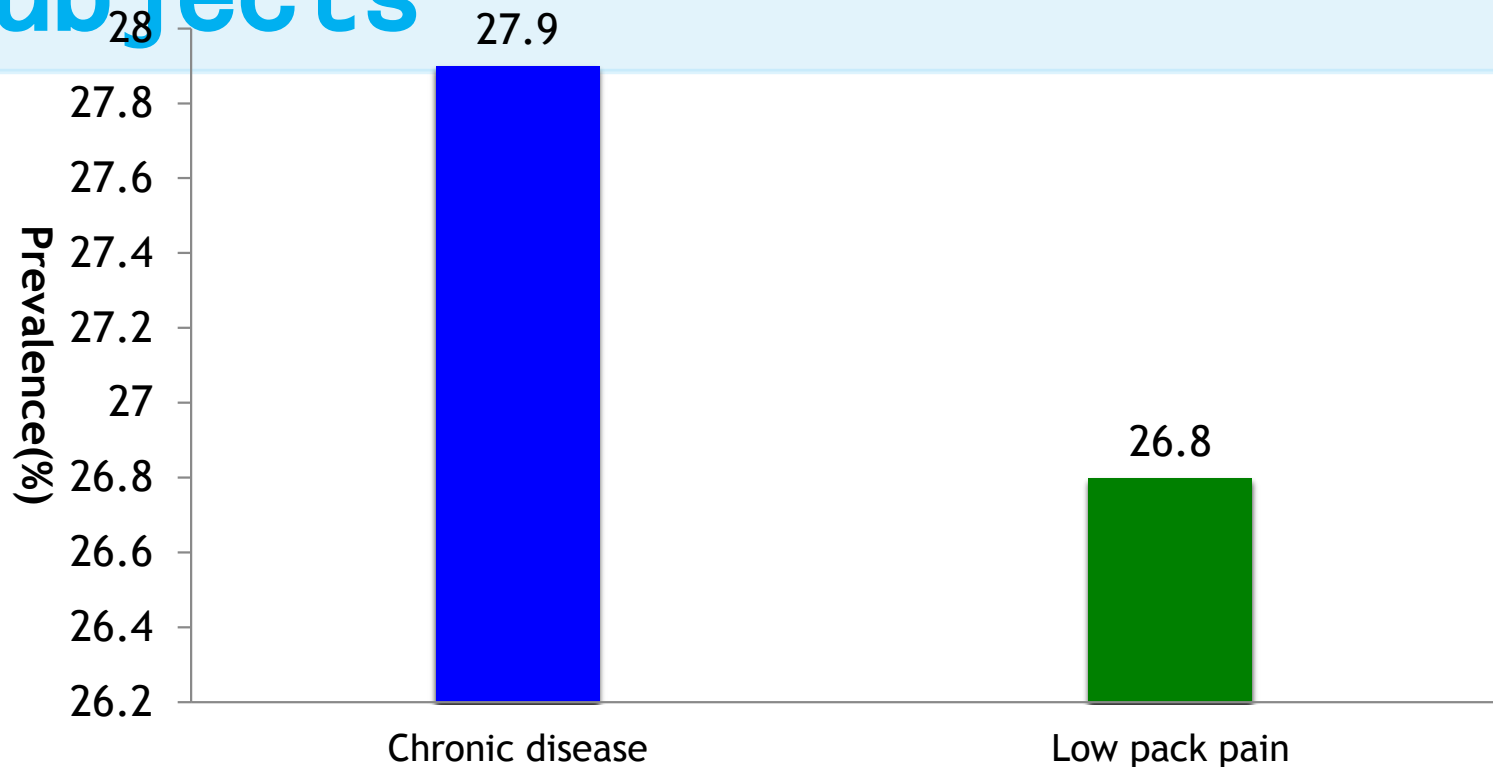
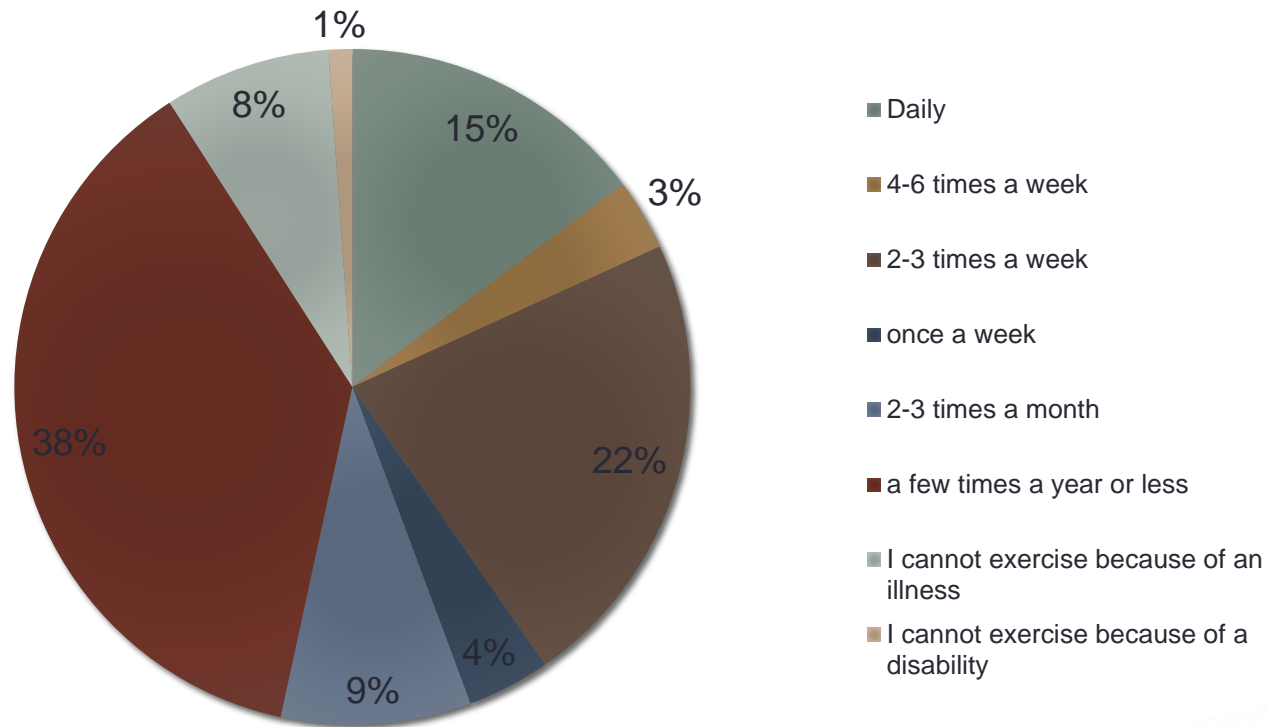


Figure 9 prevalence of chronic diseases and low back pain

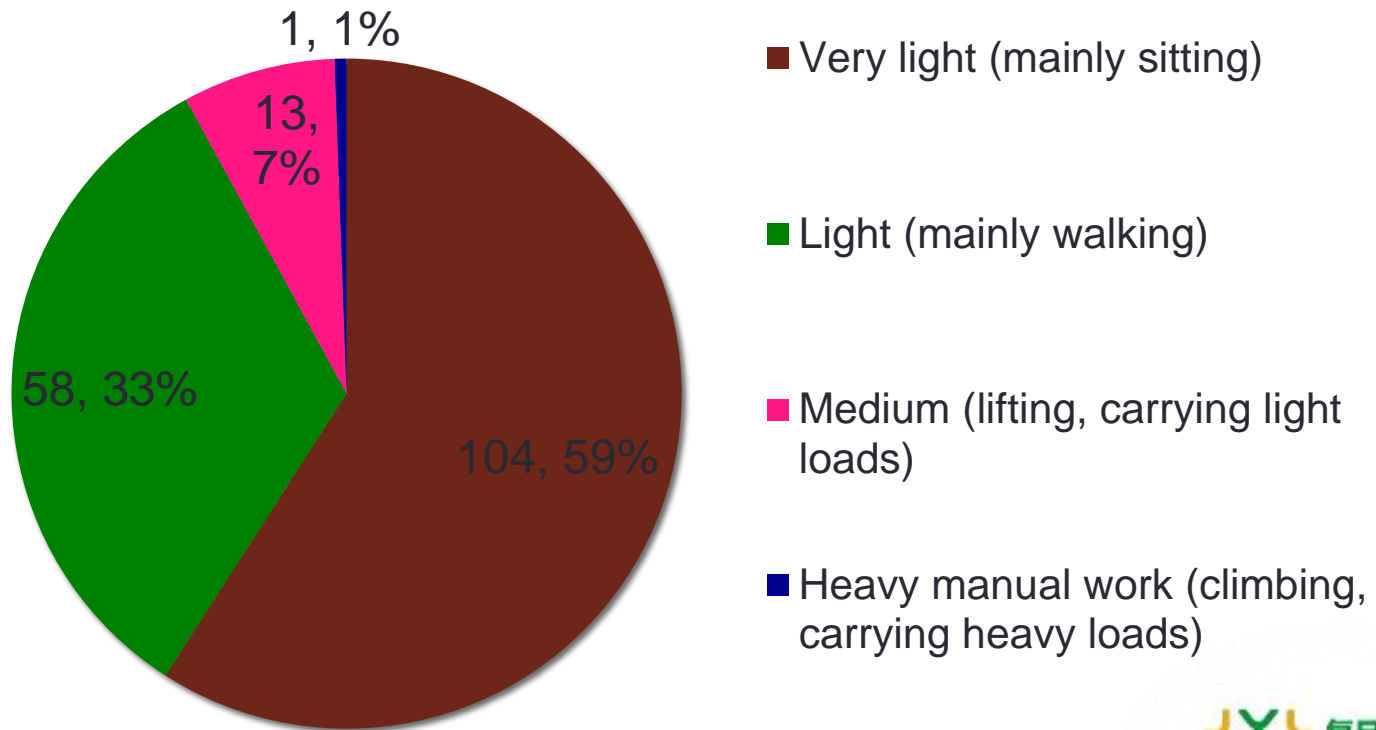
# 3. Health related behaviors

Figure 10 Physical activity in leisure time



### 3. Health related behaviors

Figure 11 physically strenuousness of routine activities



### 3. Health related behaviors

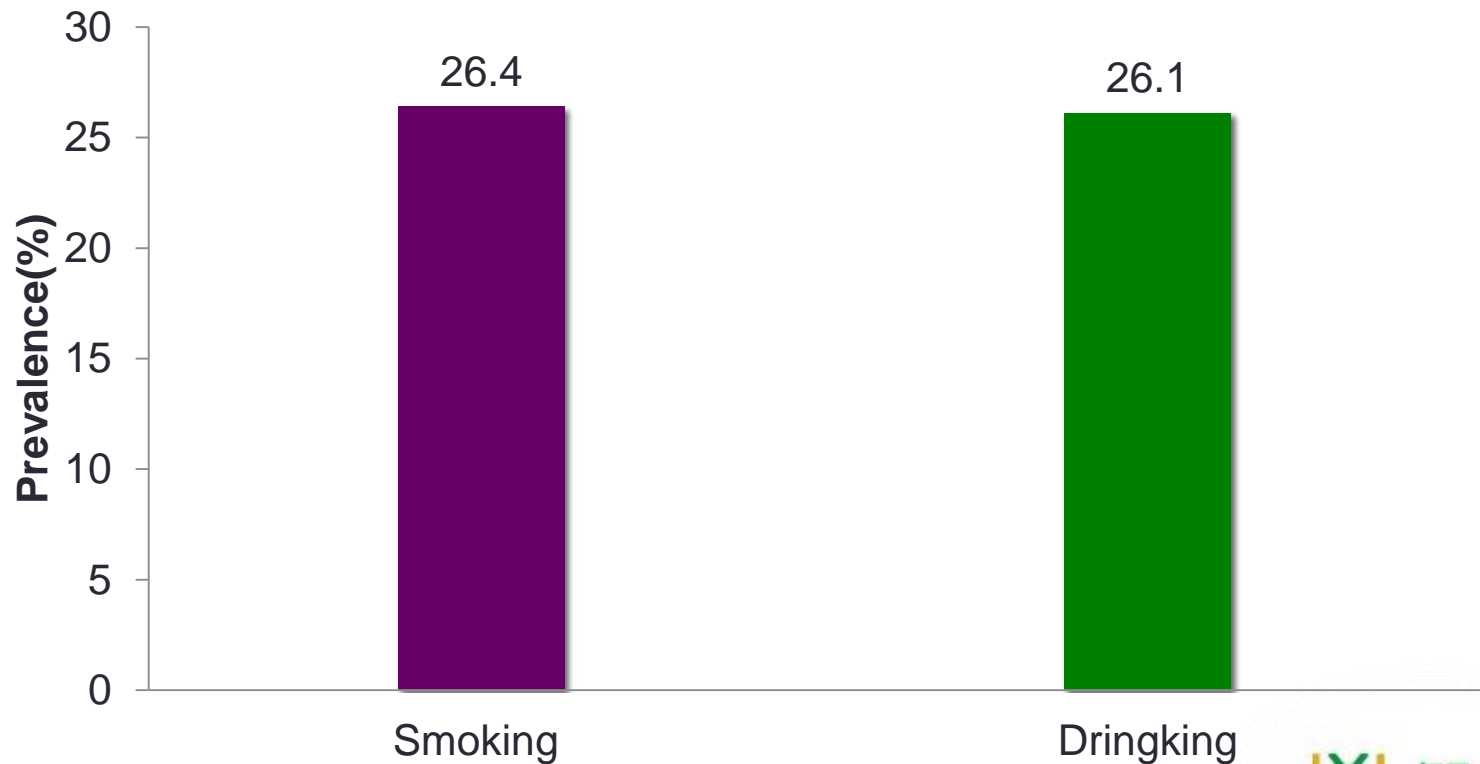


Figure 12 prevalence of smoking and drinking



复旦大学  
健康传播研究所  
Health Communication Institute  
Fudan University



*Thanks*