Urban Health Index Project in Shanghai

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Health related problems with the urbanization and globalization
Marketing

They work on our 'desire
Health related problems with the urbanization and globalization

抑郁症
流动人口

饮酒
吸烟/吸毒
Challenges: Behavioral Risk Factors of NCDs

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

- Male current daily smoking rate: 47.0%
- Proportion of consuming salt > 5 g per day: 80.9%
- Proportion of consuming oil > 25 g per day: 83.4%
- Proportion of consuming < 400 g F & V: 52.8%
- Proportion of alcohol overconsumption: 17.4%
- Proportion of doing PA regularly: 11.9%

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.

Ministry of Health, People’s Republic of China
Challenges: Prevalence of NCDs

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

Ministry of Health, People's Republic of China
Trend Change of Prevalence of Major NCDs in China

Source: National death survey; disease surveillance

Cause of death in China, 1973-2009

Ministry of Health, People's Republic of China
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.

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)

Proportion of the Elderly

Aged 60 and above

Aged 65 and above

Years


Proportion of the Elderly

10.20 14.17 18.03 18.21 20.51 25.32 30.46 32.73 24.99 26.58

11.43 13.77 13.92 13.82 13.92 15.94

7.15 7.43 9.38 13.33 13.77

10.20 14.17 18.03 18.21 20.51 25.32 30.46 32.73 24.99 26.58
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

Number of workers (×1000)

<table>
<thead>
<tr>
<th>Years</th>
<th>First industry</th>
<th>Second industry</th>
<th>Third industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>2500</td>
<td>4000</td>
<td>900</td>
</tr>
<tr>
<td>1998</td>
<td>2000</td>
<td>5000</td>
<td>1000</td>
</tr>
<tr>
<td>2008</td>
<td>1500</td>
<td>5500</td>
<td>1500</td>
</tr>
<tr>
<td>2011</td>
<td>1000</td>
<td>6000</td>
<td>2000</td>
</tr>
</tbody>
</table>

Legend:
- First industry
- Second industry
- Third industry

Note: The number of workers is given in thousands.
Life expectancy from 1983–2013 in Shanghai

1983: 73
1993: 76
2003: 80
2013: 82.5
The 5 leading causes of death and mortality per 100,000 for the urban areas of Shanghai 1950 - 2007

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cause</td>
<td>Rate</td>
<td>Cause</td>
<td>Rate</td>
</tr>
<tr>
<td>1</td>
<td>Contagious diseases</td>
<td>695.8</td>
<td>Diseases of the circulatory system</td>
<td>160.4</td>
</tr>
<tr>
<td>2</td>
<td>Diseases of the circulatory system</td>
<td>71.4</td>
<td>Tumours</td>
<td>125.3</td>
</tr>
<tr>
<td>3</td>
<td>Injure and poisoning</td>
<td>68.9</td>
<td>Respiratory diseases</td>
<td>46.5</td>
</tr>
<tr>
<td>4</td>
<td>Respiratory diseases</td>
<td>62.0</td>
<td>Injure and poisoning</td>
<td>40.9</td>
</tr>
<tr>
<td>5</td>
<td>Diseases of the digestive system</td>
<td>53.3</td>
<td>Contagious diseases</td>
<td>38.5</td>
</tr>
</tbody>
</table>
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.
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

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

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

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

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
Community manager invited the selected numbers to the community meeting room. And the trained investigators interviewed them. The surveys were conducted from 29/4/2013 to 7/5/2013.
Survey

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

- All my life: 148, 84%
- Less than 1 year: 7, 4%
- 1-5 years: 9, 5%
- 6-10 years: 2, 1%
- 11-20 years: 3, 2%
- More than 20 Years: 7, 4%
1. Characteristic of Subjects

![Pie Chart]

Figure 4 Marriage status of subjects living in Shanghai

- Married: 141, 80%
- Single: 12, 7%
- Divorced: 6, 3%
- Separated: 3, 2%
- Widowed: 14, 8%
Family members

Figure 5 adult numbers of a family living in Shanghai
Figure 6 teenager number of a family

- 75%
- 23%
- 2%
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

- 38%: Daily
- 22%: 4-6 times a week
- 15%: 2-3 times a week
- 9%: once a week
- 8%: 2-3 times a month
- 3%: a few times a year or less
- 1%: I cannot exercise because of an illness
- 1%: I cannot exercise because of a disability
3. Health related behaviors

Figure 11: Physically strenuousity of routine activities

- Very light (mainly sitting): 1, 1%
- Light (mainly walking): 13, 7%
- Medium (lifting, carrying light loads): 58, 33%
- Heavy manual work (climbing, carrying heavy loads): 104, 59%
3. Health related behaviors

Figure 12 prevalence of smoking and drinking

Prevalence(%)  
26.4  
26.1

Smoking  
Drinking
Thanks