

CITY PROFILE

Seosan, Republic of Korea



August 2006

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Seosan City

Health Profiles

Submitted by : Seosan City

Submitted on : August 2006

Submitted to : c/o Promotion Committee for Healthy Cities,
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1. Introduction

The idea of creating a healthy city is focused on a concern that healthy cities are becoming increasingly essential as more and more people tend to live in or move to cities, and, of course, the belief that life in the city is unhealthy.

The Healthy City concept was developed in 1984 and the WHO 'Healthy Cities Project' was launched in 1986 (Werna & Harpham, 1995). The World Health Organization's (WHO) Healthy Cities Project (HCP) is a long-term development project. Ultimately, the project seeks to enhance the physical, mental, social and environmental well-being of people who live and work in urban areas.

One of the requirements to be designated a "Healthy City" is to produce a City Health Profile (CHP) bringing together key information on health and its deterrents. This profile considers health and living conditions of a specific city's inhabitants. It also represents a quantitative and a qualitative description that provides relevant information on health issues and factors determining health, and addresses areas which can promote health in the city. This would form the basis of a City Health Plan, setting strategies and intervention programs to improve the population's health.

The purpose of a city health profile is to provide information about the citizen's health and the deterrents of health, to identify the courses of action to promote health, and to inspire all relevant groups to perform satisfactorily and to promote health in a wise manner. With growing national and international necessities for Healthy City Projects in countries, it is timely to write the Seosan City health profiles.

This profile is straightforward in presenting a number of data regarding the health of inhabitants and health related factors. All information available has been presented and deals with crucial features of Seosan's population, like vital events (birth and death), health status, lifestyle, living conditions, socio-economic conditions, certain environmental aspects, infrastructure, and so forth.

The Seosan City Health Profile has been designed using the methodology recommended by the World Health Organization.

2. General Status

2.1 Physical Characteristics and History

Seosan is located in the mid-west area of Korea, and bounded by the Yellow Sea to the west. It is made up of plains and hill areas, in Seosan, rice and barley are mainly produced because of the climate suitable for agriculture however a large amount of specialties such as garlic and ginger are produced.



<Fig 1> Sighting of Seosan City



<Fig 2> Seosanmaaesamjonbul

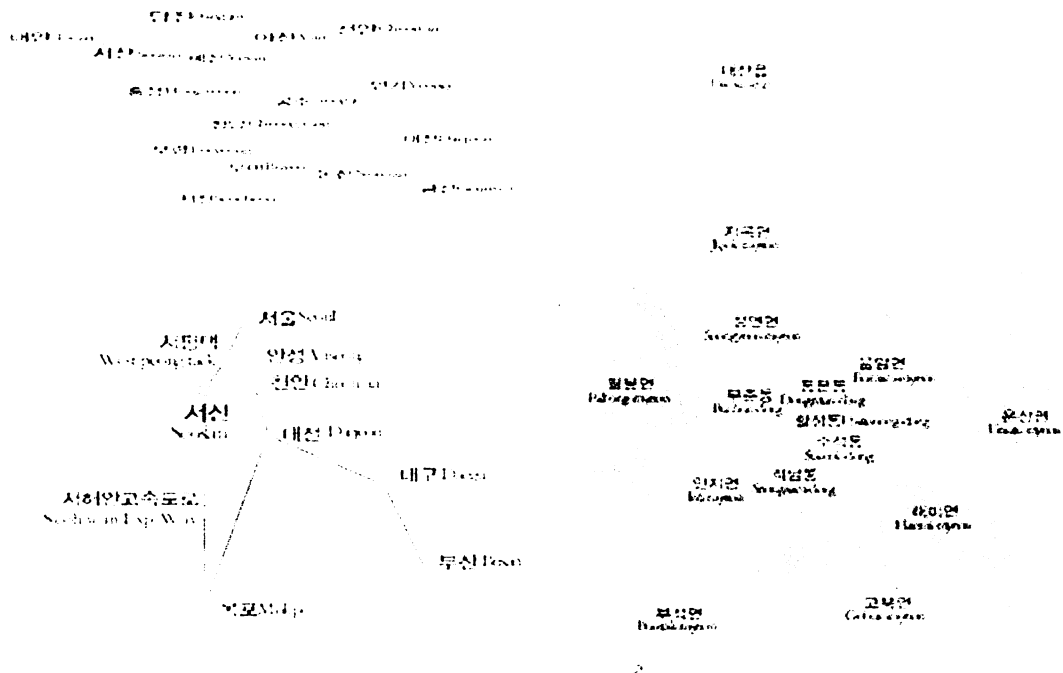
In Seosan, many people have lived from the prehistoric age because of its environmental suitable for human dwelling. In Baekjae period, it was called Gigun and after moving the capital to Gongju and Buyeo, a new culture was formed as an outpost for exchanges with China and it especially lead Baekjae's Buddhist culture such as Seosanmaaesamjonbul and Bowaonsa site. During the united Shilla period, Baekjae's advanced culture continued, and it was far from Gyeongju, the capital, there was not much of an occasion that Seosan would appear on the surface of history.

On August 3 1994 by the announcement of No.4774 of law, Seosan City and Seosan-gun were unified and it became the new Seosan City in the form of a combination of a city and agricultural region with one eup, nine myeons and six dong, and with the abroation of Osan-dong, it became one eup, nine myeons and five dong.

The largest petrochemical complex in Korea is being established by Daesan Imhae Industrial Complex Project where it is ready with natural advantages, and thanks to large scale reclamation project, large farmland is being developed.

2.2 Administrative System

Seosan has an administrative system composed of ‘eup’, ‘myeon’, and ‘dong’. In 2006 the administrative system of Seosan consists of one eup, nine myeons, and five dongs.



<Fig 3> Map of Seosan

2.3 Symbol

Green symbolizes the initial letter “s” of Seosan, and the pine tree, the Seosan City tree. It reflects the richness of nature and comfortableness of the city. White symbolizes the rock-carved Buddha triad, which is the major cultural treasure of Seosan. White also stands for the Chinese character “山” meaning mountain. It represents the everlasting leap toward advancement, and development. Finally blue symbolizes the clear blue seas of Seosan. It represents the harmony and the unity of the citizens of the city of Seosan as the central place of the west coast.

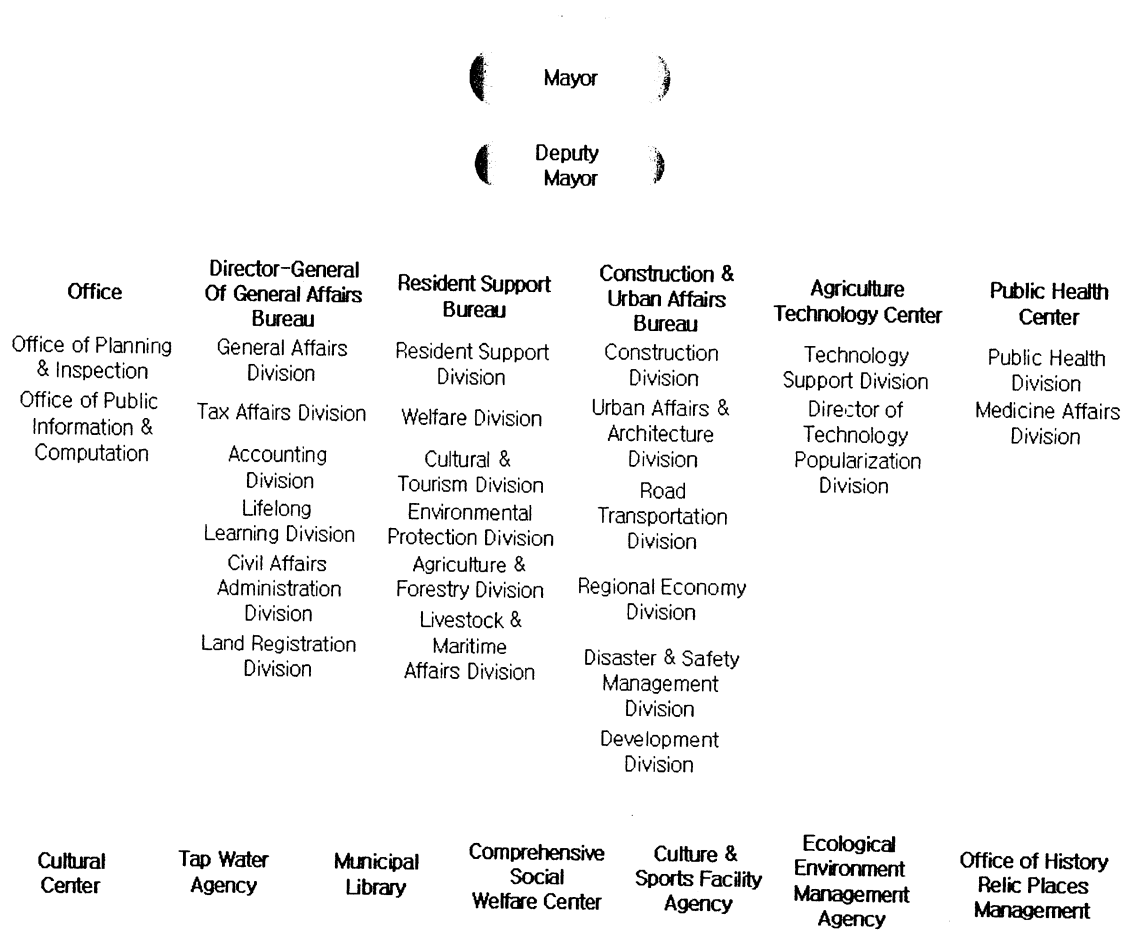
The logo of the city of Seosan represents the richness of Mother Nature, and the eternal leap toward advancement and development. It symbolizes the harmony and unity of the citizens of a city with a

comfortable and good environment which moves towards greatness as a central part of the new age for Korea, one in which the Seosan area is of prime importance.



<Fig 4> Symbol of Seosan

2.3.1 Seosan City



<Fig 5> Organizational chart

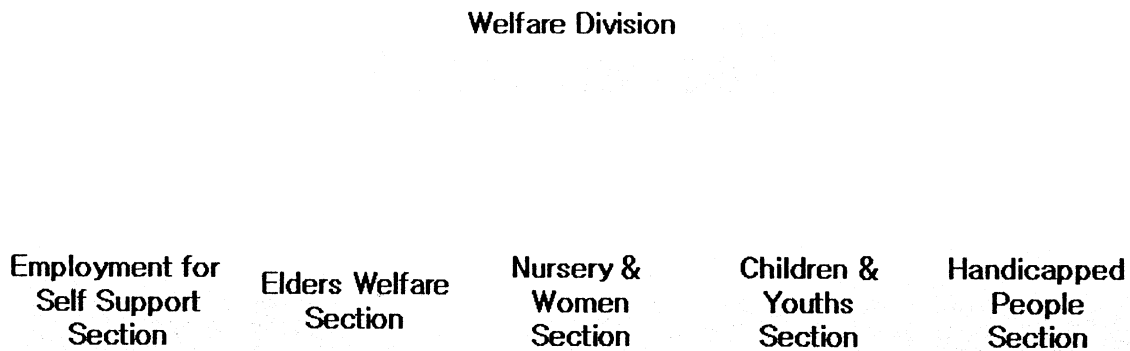
The organizational chart of Seosan City Council looks as follows: The mayor leads the overall administration and secretarial section while the deputy mayor supports the mayor.

2.3.2 Welfare and Health Related Parts

The welfare and health related parts of the administrative organization of Seosan City, related to healthy city programs, are as follows.

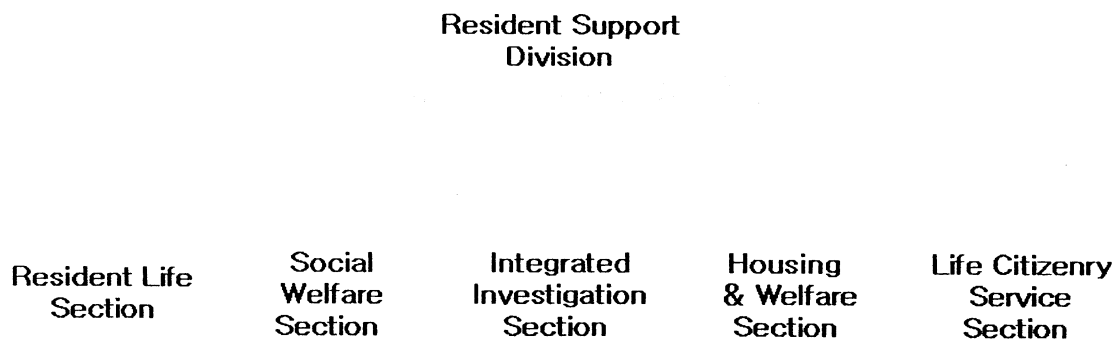
1) The Welfare Division of the Resident Support Bureau

The Welfare Division constitutes of a Employment for Self Support Section, Elders Welfare Section, Nursery & Women Section, Children & Youths Section, and Handicapped People Section.



<Fig 6> Organizational chart of the Social Welfare Division

2) Resident Support Division of the Resident Support Bureau

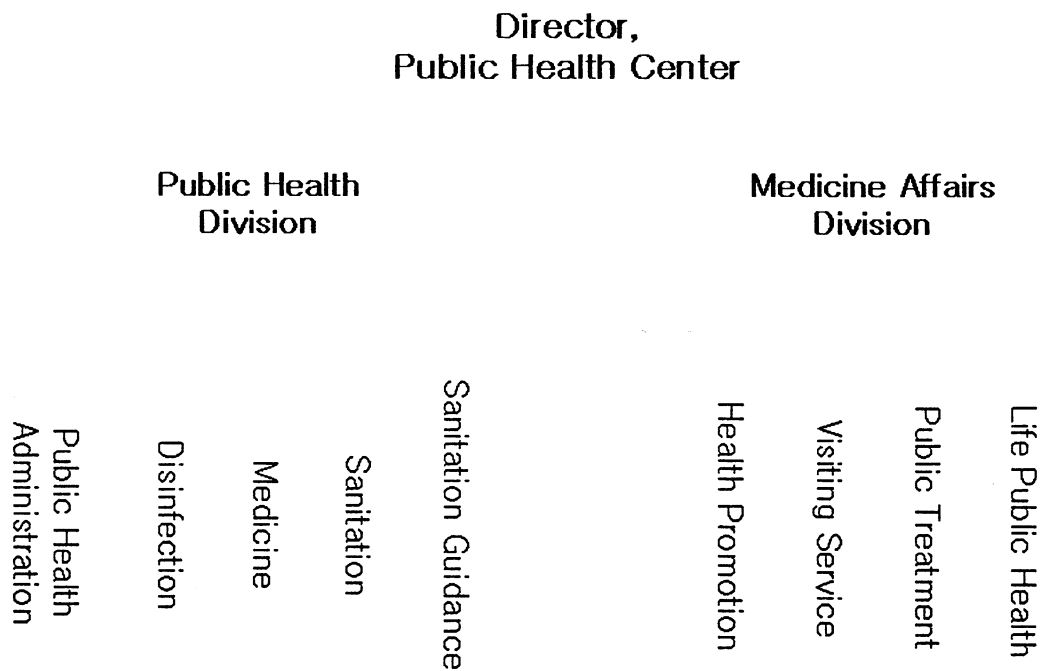


<Fig 7> Organizational chart of the Resident Support Division

3) Public Health Center

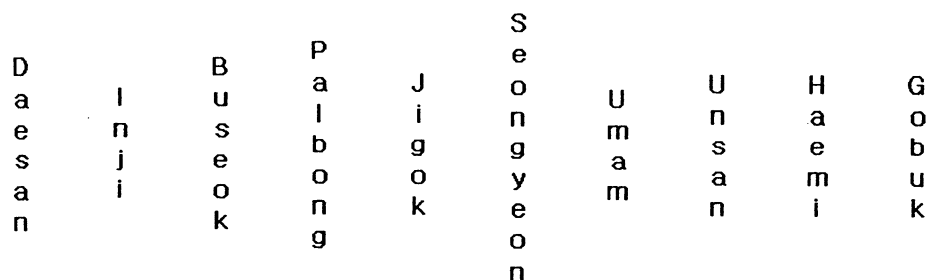
There are currently one Public Health Center, 10 Health Sub-centers, and 15 Primary Health Posts in Seosan city.

➡ Public Health Center



<Fig 8> Organizational chart of a Public Health Center

➡ Location of 10 Health Sub-centers



<Fig 9> Location of 10 Health Sub-centers

➡ Location of 15 Primary Health Posts

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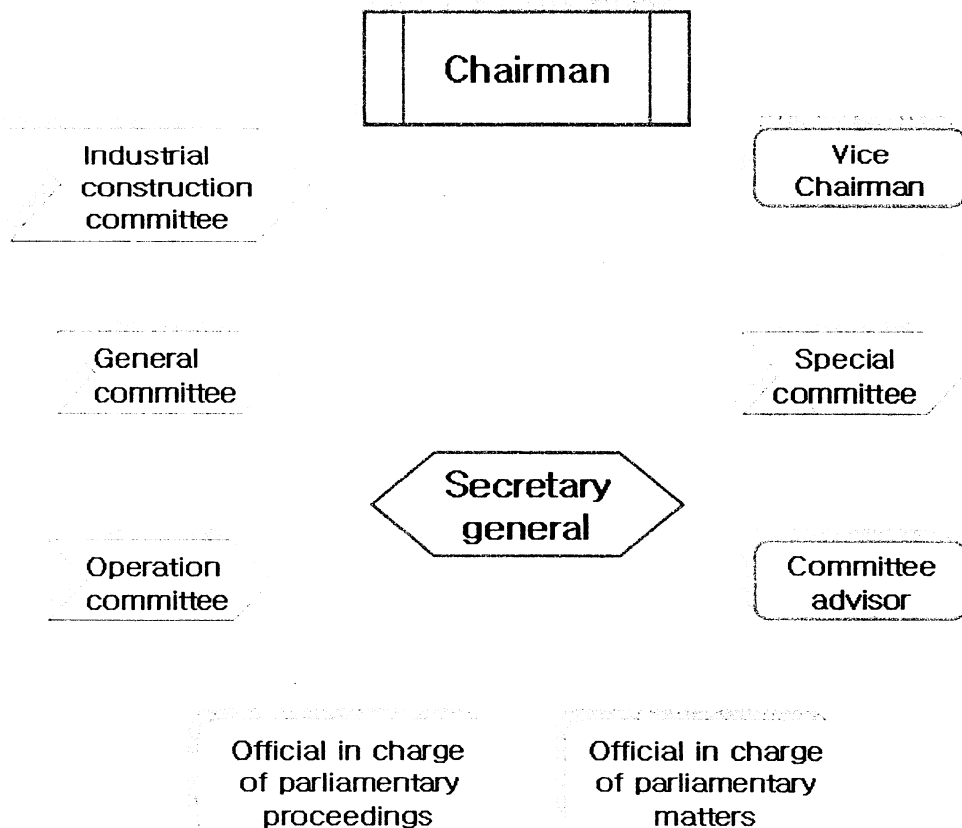
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<Fig 10> Location of 15 Primary Health Posts

2.4 Seosan City Council

The Seosan City Council is led by a chairman and vice chairman, and is composed of four committees and secretarial offices. Following, is the organizational chart of the Seosan City Council.



<Fig 11> Organizational chart of Seosan City Council

2.5 Vision & Mission

In 2006 the administrative objective and target policies are intended for a Happy Seosan City.

Administrative Objective and Target Policy

【 MISSION 】 Create happy Seosan City by citizen oriented change and innovation

【 VISION 】 Build the best living conditions of Seosan

【 SLOGAN 】 Create an urban myth in Seosan

Target Policy [Themes]

- 【 Human 】** Healthy society with participation and coordination
- 【 Nature 】** Clear nature and fine environment
- 【 Culture 】** Succession of tradition and beautiful culture
- 【 Industry 】** Create strategic industries and balanced city development

<Fig 12> Administrative objective and target policies of Seosan City Council

3. Demographic Characteristics

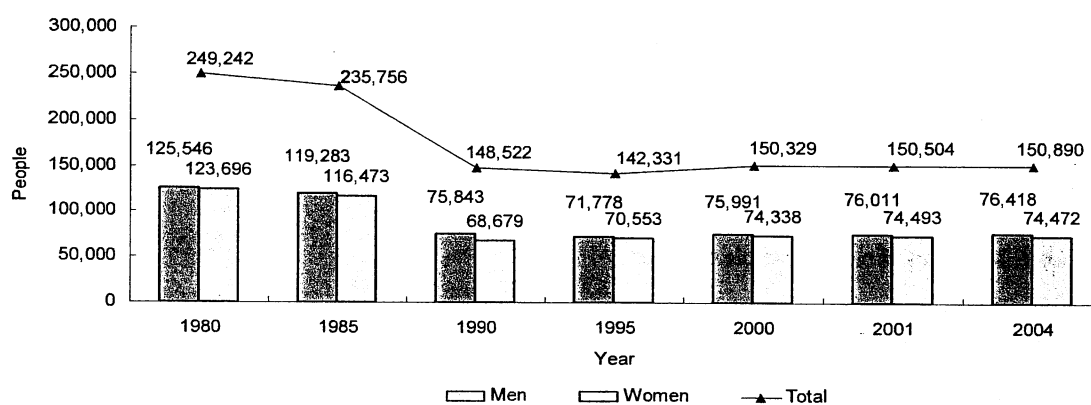
A census taken in 2004, showed that Seosan city had a population of 150,890 people at that time. Since 1980, the numbers have unfortunately decreased from 249,242 to 142,331 in 1995. However, the figure of 150,890 in 2004 showed a slight increase.

Table 1, in the 2004 sex-ratio statistics shows that the number of men for every 100 women beats that figure by 2.6. Statistics from the Korean Statistical Office, shows that the sex-ratio of the entire Korean population is 100.7. Interesting to note is the fact that here are no significant differences between the figures of Seosan City and that of South Korea as a whole. However, the numbers of the male population are a little more than that of their female counterparts.

<Table 1> Trend of population size

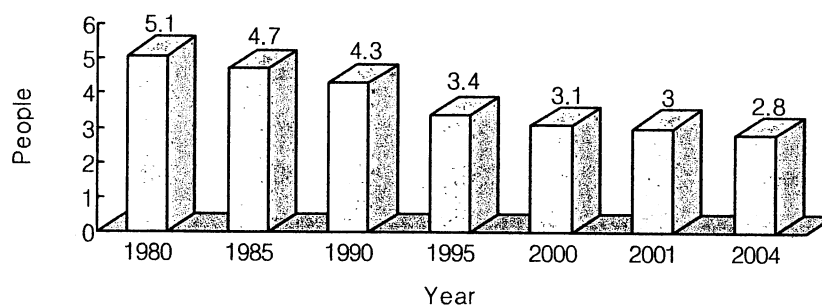
Year	Number	People per household	Number	Population density (people/km ²)	Men	Women	Sex ratio
1980	48,529	5.1	249,242	238	125,546	123,696	101.5
1985	50,560	4.7	235,756	221	119,283	116,473	102.4
1990	34,610	4.3	148,522	242	75,843	68,679	110.4
1995	41,462	3.4	142,331	193	71,778	70,553	101.7
2000	48,709	3.1	150,329	203	75,991	74,338	102.2
2001	49,906	3.0	150,504	204	76,011	74,493	102.0
2004	54,435	2.8	150,890	204	76,418	74,472	102.6

Source : Seosan City, Annual Statistics, 2005



<Fig 13> Trend of population size

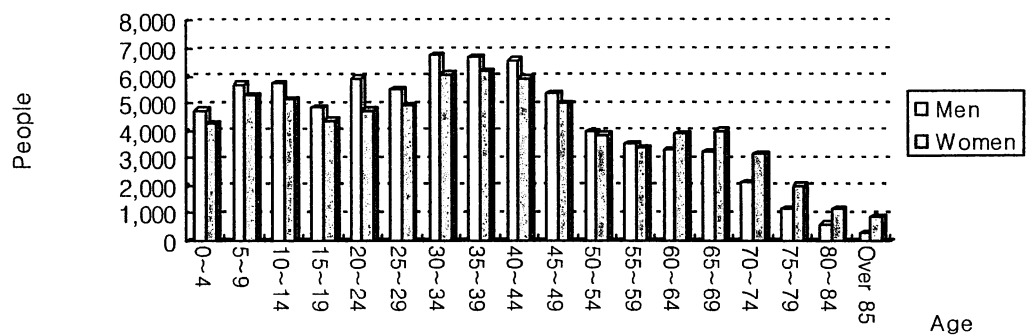
Source : Seosan City, Annual Statistics, 2005



<Fig 14> People per household

Source : Seosan City, Annual Statistics, 2005

Data of the population census taken in 2004 indicates that the population in Seosan City is influenced by a progressive ageing trend since people older than 65 already account for 12.37% of the population, whereas inhabitants younger than 14 account for only 20.57%. In the Republic of Korea, the ratio of people younger than 14 is 20.96%, whereas the ratio of people older than 65 is 8.0% (Korean Statistical Office, 2000). These findings indicate that the ratio of younger people in Seosan City is similar to that of the whole territory of the Republic of Korea. However, the ratio of elderly people in Seosan City is higher when comparing to the Republic of Korea as a whole.



<Fig 15> Population structure by age and sex

Source : Seosan City, Annual Statistics, 2005

<Table 2> Trend of elderly people number

(Unit : persons, %)

Age \ Year		1999	2000	2002	2004	Increasing rate (2004/1999)
Sub-total		9,574	10,239	11,506	12,490	1.3
65~74	Men	3,926	4,221	4,811	5,342	1.4
	Women	5,648	6,018	6,695	7,148	1.3
Sub-total		3,858	4,054	4,381	4,928	1.3
75~84	Men	1,415	1,482	1,572	1,749	1.2
	Women	2,443	2,572	2,809	3,179	1.3
Sub-total		839	876	997	1,154	1.4
Over 85	Men	172	193	232	291	1.7
	Women	667	683	765	863	1.3
Total		14,271	15,169	16,884	18,572	1.3

Source : Seosan City, Annual Statistics, 2005

According to the population census in 2004, there were 18,572 people older than 65 in Seosan City. Statistics, based on demographics, shows clearly that 12.37% of the people in Seosan city are over 65. Therefore, the population of Seosan City is considered an ageing society. With regards to the specific needs of older people, social welfare and health care services should be prepared, because the numbers of older people are on the rise.

Seosan city's divorce rate slightly decreased from 2.4% in 1999 to 2.1% in 2001, but then increased to 2.7% in 2003. The overall divorce rate in the Republic of Korea is increasing, but that of Seosan city does not show significant changes since 1999.

<Table 3> Divorce rate

(Unit : cases, %)

Year	Population	The number of divorce	Divorce rate	
			Seosan City	Republic of Korea*
1999	151,021	357	2.4	2.5
2000	150,329	358	2.4	2.5
2001	150,504	309	2.1	2.8
2002	148,697	376	2.5	3.0
2003	152,494	417	2.7	3.5
2004	150,890	373	2.5	2.9

Source : Seosan City, Annual Statistics, 2005

* Source : Korean Statistical Office, <http://www.nso.go.kr>

4. Health Status

4.1 Vital Statistics

In 2004, 1,551 children were born and 1,038 people died in Seosan City, compared to the national average of crude birth rate, which was 9.8% for year 2004(Korean Statistical Office, 2005), the vital index in Seosan City was 10.3%, which was not greatly different. Figures in 2004 indicated that Seosan City has entered a depopulation phase, low-birth rate and low-death rate structure.

<Table 4> Number of births and deaths

(Unit : persons)

Year	No. of birth	No. of death	Population
2002	1,623	959	148,697
2003	1,597	970	152,494
2004	1,551	1,038	150,890

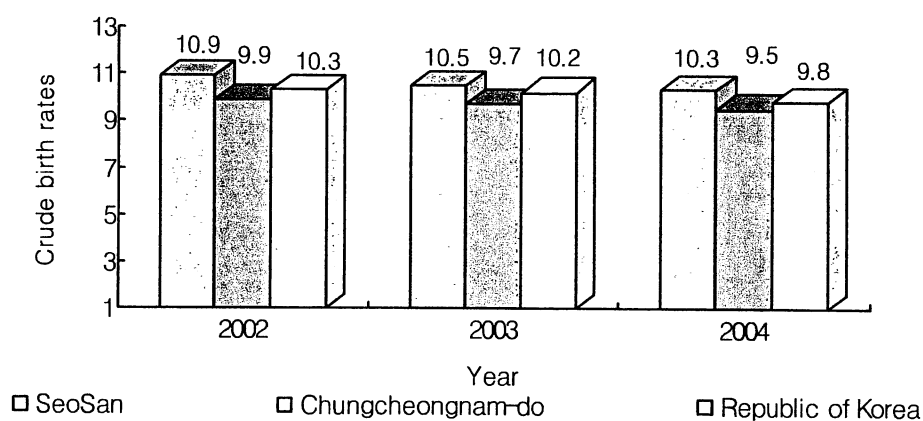
Source: Seosan City, Annual Statistics, 2005

<Table 5> Crude birth and death rates per 1,000 people

(Unit : %)

Year	Crude birth rates			Crude death rates		
	Seosan	Chungcheong nam-do	Republic of Korea	Seosan	Chungcheong nam-do	Republic of Korea
2002	10.9	9.9	10.3	6.5	7.6	5.1
2003	10.5	9.7	10.2	6.4	7.4	5.1
2004	10.3	9.5	9.8	6.9	7.2	5.1

Source: Seosan City, Annual Statistics, 2005



<Fig 16> Crude birth rates

Source: Seosan City, Annual Statistics, 2005

<Table 6> Number of neonate

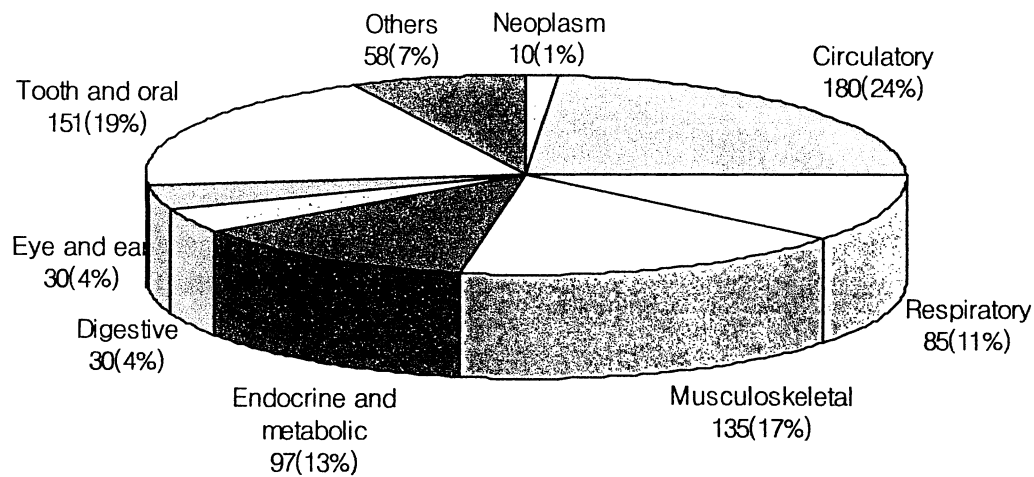
(Unit : persons)

Year	No. of normal birth	No. of less than 2500g	No. of dead neonate	No. of still birth
2004	1,551	54	2	5

Source : Seosan City Public Health Center, 2004

4.2 Estimated Incidences of Diseases

The following figures show results obtained after a survey in Seosan City by Yonsei University for the purpose of a community survey in 2006. Based on the results from this survey, the incidences of diseases experienced by respondents last year, over a period of three months, were as follows: circulatory diseases, 24%, followed by teeth and oral diseases, 19% and finally diseases involving both musculature and skeleton diseases, 17%.



<Fig 17> Morbidity experienced by respondents during an one year period, over three months

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

4.3 Disability

<Table 7> Types of disability

(Unit : persons)

Year	Total	Limbs and body	Brain	Visual	Auditory	Verbal	Mental retardation	Developmental	Mental	Renal	Cardiac
2000	2,800	2,008	13	216	273	-	248	-	15	18	9
2001	4,024	2,478	222	401	358	-	387	9	74	74	21
2002	4,422	2,675	284	454	331	-	412	13	90	81	26
2003	5,026	2,949	353	536	354	47	460	13	115	88	36
2004	5,721	3,241	465	609	427	53	515	21	138	102	36

Source : Seosan City, Annual Statistics, 2005

In 2004, 5,721 people were registered as being disabled by the Social Services Department of Seosan city. There were three major categories: limbs and body, 3,241 people, visual disability, 609 people and mental retardation, 515 people.

4.4 Obesity

By a Community Survey of Seosan City, the following figures show the Body-Mass-Index (BMI) of respondents. The percentage of obesity in male respondents aged 20 to 85 was 29.1%, and that in female respondents was 14.5%. The percentage of obesity in male is higher than that in female.

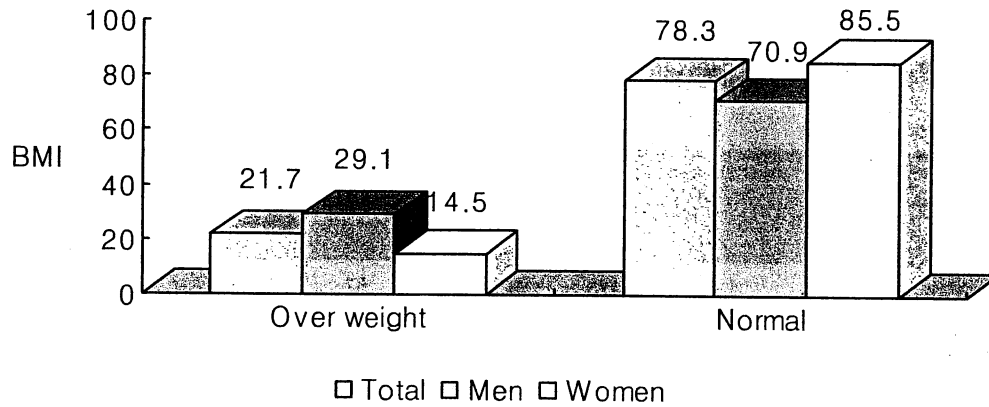
<Table 8> Body Mass Index(BMI)*

(Unit : persons, %)

BMI Level	Total		Men		Women	
	Person	Rate	Person	Rate	Person	Rate
Over weight	260	21.7	173	29.1	87	14.5
Normal	938	78.3	422	70.9	514	85.5

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

* BMI 18.5 ~ 24.9 = normal weight, 25 and over = overweight)

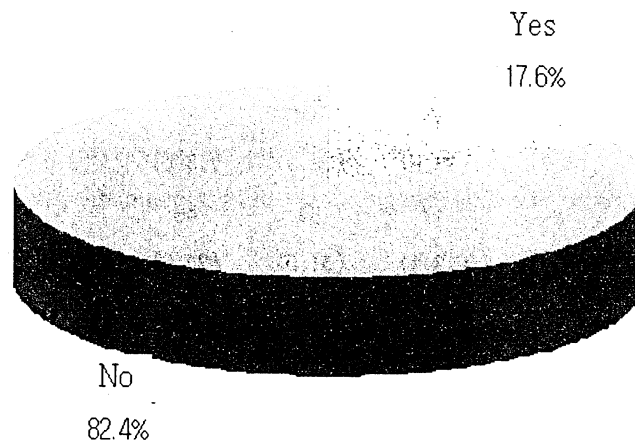


<Fig 18> Body Mass Index(BMI)

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

4.5 Mental Health

Statistics of respondents who, over two weeks last year, have experienced a feeling of sadness or despair amounts to 17.6% of the total respondents questioned.



<Fig 19> Respondents who experienced sadness or despair over 2 weeks in 2005

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

4.6 Citizen's Perception on Their Health Status

<Table 9> Perception of health status

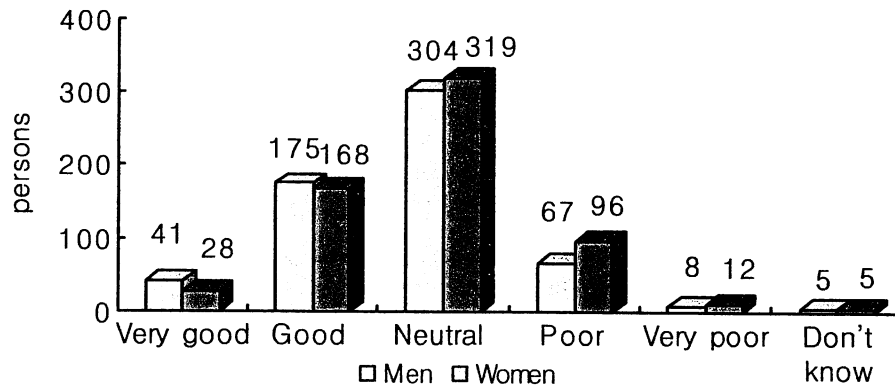
(Unit : persons, %)

		Very good	Good	Neutral	Poor	Very poor	Don' t know	Total
Sex	Men	41	175	304	67	8	5	600
		(6.8)	(29.2)	(50.7)	(11.2)	(1.3)	(0.8)	(100.0)
	Women	28	168	319	96	12	5	628
		(4.5)	(26.8)	(50.8)	(15.3)	(1.9)	(0.8)	(100.0)
Region	Urban	26	139	249	66	11	7	498
		(5.2)	(27.9)	(50.0)	(13.3)	(2.2)	(1.4)	(100.0)
	Rural	43	204	376	97	9	3	732
		(5.9)	(27.9)	(51.4)	(13.3)	(1.2)	(0.4)	(100.0)
Year	20~29	20	84	132	26	0	2	264
		(7.6)	(31.8)	(50.0)	(9.8)	(0.0)	(0.8)	(100.0)
	30~39	9	88	166	26	2	2	293
		(3.1)	(30.0)	(56.7)	(8.9)	(0.7)	(0.7)	(100.0)
	40~49	22	103	152	27	3	3	310
		(7.1)	(33.2)	(49.0)	(8.7)	(1.0)	(1.0)	(100.0)
	50~64	9	46	104	25	7	2	193
		(4.7)	(23.8)	(53.9)	(13.0)	(3.6)	(1.0)	(100.0)
	65~74	8	17	54	45	5	1	130
		(6.2)	(13.1)	(41.5)	(34.6)	(3.8)	(0.8)	(100.0)
	Over 75	0	2	12	14	3	0	31
		(0.0)	(6.5)	(38.7)	(45.2)	(9.7)	(0.0)	(100.0)

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

A Community Survey of Seosan City, showed 41 men, or 6.8% as perceiving their health status to be 'very good'. 29.2%, or 175 men, responded with 'good', while 304 men, or 50.7%, gave a 'neutral' answer. Women, on the other hand, answered differently. 28 women, or 4.5% perceived their health to be 'very good'. 168 women, or 26.8%, gave a 'neutral' answer, while 319 women, or 50.8%, gave 'good' as their answer. More than 80% of the total respondents perceived their health status to be good. The number of men who perceived their health status to be good is slightly more than that of women. 20 to 29 year-old respondents answered as follows: 'very good' 20 persons, or 7.6% 'good'

84 persons or 31.8%, 'neutral' 132 persons or 50.0%. Respondents between the ages of 65 to 74 answered as follows: 'very good', 8 persons or 6.2%. 'good' 17 persons or 13.1%. 'neutral' 54 persons, or 41.5%. Generally the number of younger respondents who perceived their health to be good is more than that of older respondents.



<Fig 20> Perception of health status

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

5. Lifestyles

5.1 Smoking

According to a Community Survey of Seosan City, it was reported that 43.7% of men and 5.6% of women respondents are current smokers. Men's smoking rate shows to be about 8 times higher than that of women.

<Table 10> Smoking rates of adults(over 20 years old)

(Unit : %)

Men	Women
43.7	5.6

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

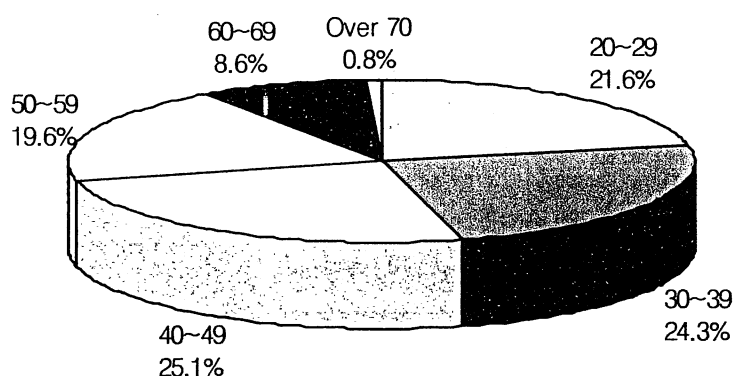
This Survey shows that the smoking rate is 25.1% in the 40 to 49 year old age group, 24.3% in the 30 to 39 year old group and 8.6% in the 60 to 69 year old group. It was found that older respondents smoking rate is higher than younger respondents.

<Table 11> Smoking rates in adults(over 20 years old) by age group

Age	Smoking rates (%)
20 ~ 29	21.6
30 ~ 39	24.3
40 ~ 49	25.1
50 ~ 59	19.6
60 ~ 69	8.6
Over 70	0.8
Total	100.0

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

According to this survey 130 men, or 53.7% smoke between half a packet and a full packet of cigarettes daily; while 76 men, or 31.4% smoke up to half a packet per day. Smoking habits of females differ as follows: 34.4% or 11 women smoke between half a packet and a full packet per day and 20 women, or 62.5% up to half a packet of cigarettes daily.



<Fig 21> Smoking rates of adults(over 20 years old) by age group

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

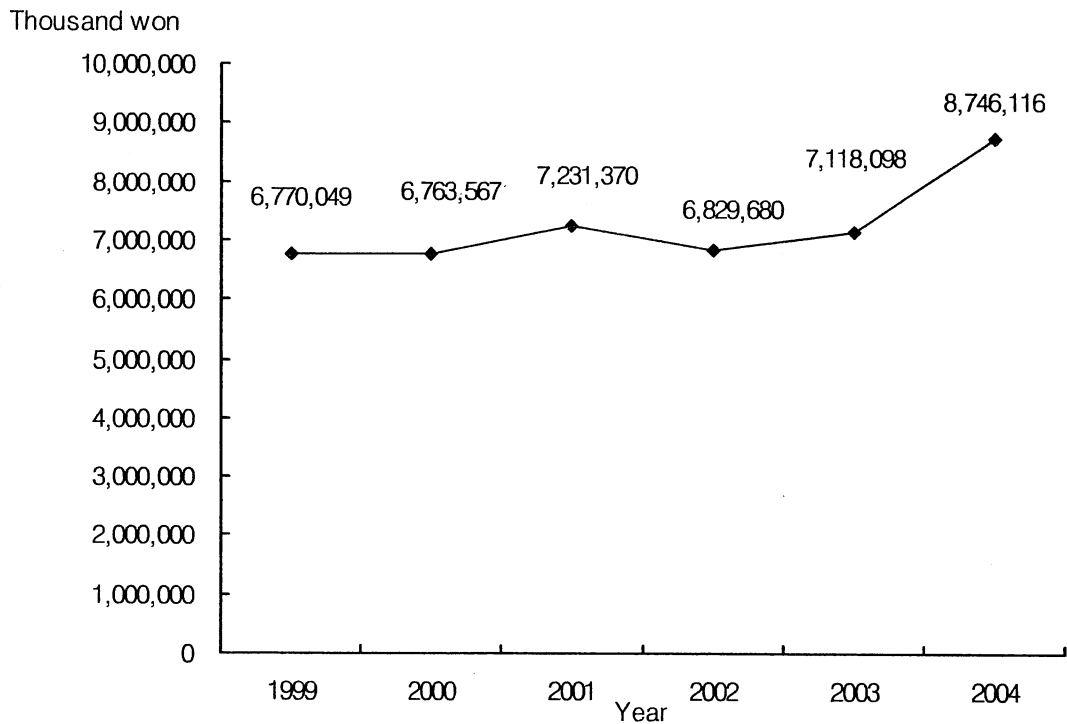
<Table 12> Smoking amount per day in adults(over 20 years old) by sex

(Unit : persons, %)

Smoking amount	Men	Women
less than 1/2 pack	76(31.4)	20(62.5)
1/2 ~ 1 pack	130(53.7)	11(34.4)
1 ~ 1/2 pack	1(4.5)	-
1/2 ~ 2 pack	24(9.9)	1(3.1)
Over 2 pack	1(0.4)	-
Total	242 (100.0)	32 (100.0)

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

Indirect data is also available by which one could also examine the degree of smoking, such as data on tobacco consumption taxes. Seosan City's collected tobacco consumption taxes have increased from 6.7 billion won in 1999 to 8.7 billion won in 2004.



<Fig 22> Tobacco consumption taxes

Source : Seosan City, Annual Statistics, 2005

5.2 Drinking

Excessive drinking has always been a risk factor. It usually leads to an increase of health problems. Frequent drinking increases the probability that someone might physically hurt himself or other persons. Alcohol consumption during pregnancy puts the life and health of mother and baby at risk. Drinking contributes to a wide range of diseases, health conditions, and risk behaviors; from mental disorders, liver diseases and tumors to traffic accidents.

The following figure shows the results obtained from a representative sample of 539 households in Seosan City by Yonsei University for the purpose of Community Survey in 2006. According to this survey 476 men, or 81.2% and 347 women, or 56.0% of the respondents questioned, are currently frequent alcohol consumers. Alcohol consumption was higher in men than in women.

<Table 13> Drinking rates of adults (over 20 years old)

(Unit : persons, %)

Men	Women
476(81.2)	347(56.0)

Source : Seosan City, Yonsei University, Community Survey of Seosan City, 2006

<Table 14> Alcohol consumption of adults(over 20 years old) by age group

(Unit : persons, %)

Age	Person	Rate
20 ~ 29	201	24.6
30 ~ 39	216	26.4
40 ~ 49	209	25.6
50 ~ 59	124	15.2
60 ~ 69	44	5.4
Over 70	23	2.8
Total	817	100.0

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

Table 14 shows the alcohol consumption experience of Seosan city residents as follows: 26.4% in the 30 ~ 39year age group, 25.6% in the 40 ~ 49year age group, and 5.4% in the 60 ~ 69year age

group. Alcohol consumption is the highest in 30s and 40s age groups, and generally younger respondents' consumption of alcohol is higher than older respondent's. To lower alcohol consumption, more effective health services, including a health education program should be made available.

Figures in Table 15 show that 34.6% of men consume alcohol at least 5 times per month; 25.3% between 6 and 9 times; and 16.9% between 10 and 14 times per month. The figures for women are as follows: 65.1% consume alcohol about 5 times per month; 20.6% between 6 and 9 times and 10.3% between 10 and 14 times per month.

<Table 15> Drinking frequency per month in adults(over 20 years old)

(Unit : person, %)

Frequency	Men	Women
Under 5times	123(34.6)	114(65.1)
6 ~ 9	90(25.3)	36(20.6)
10 ~ 14	60(16.9)	18(10.3)
15 ~ 19	27(7.6)	1(0.6)
Over 20times	56(15.7)	6(3.4)
Total	356(100.0)	175(100.0)

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

5.3 Physical activity

Individuals who regularly exercise rarely become ill or die from cardiovascular diseases, unlike people who are physically inactive. In addition, studies show that there is a strong association between inadequate physical activity and cancer, especially cancer types such as colon, prostate and breast cancer.

The following figures were obtained from a representative sample of 539 households in Seosan City by Yonsei University for the purpose of a community survey in 2006. These figures show that 28.5% of men engage 3 times per week in physical activities, while 24.0% of women do likewise. However, 43.8% of men and 51.6% of women answered 'not at all' when questioned. It is clear that about 50% of men and women do not engage in physical exercises.

The frequency of physical activity by region was higher in the 'dong', or urban area with a 30.7% engagement. In the 'eup.myeon', or rural area, the figure represents only 23.2%. Data also shows how the frequency of physical activities differ in various age groups; 32.2% in the 50 ~ 64 year old group; 29.6% in the 40 ~ 49 year old group and 24.8% in the 20 ~ 29 year old group.

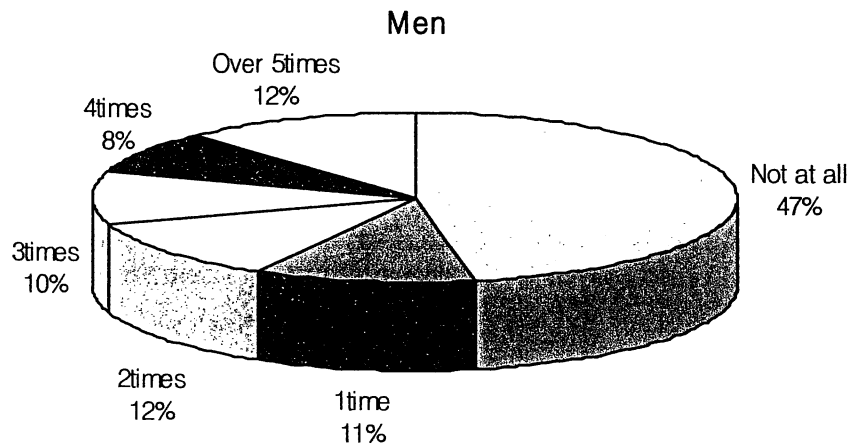
<Table 16> Present state of physical activity (per week)

(Unit : persons, %)

		Not at all	1time	2times	3times	4times	Over 5times	Total	Physical activity rate*
Sex	Men	263 (43.8)	102 (10.7)	64 (11.7)	57 (9.5)	43 (7.2)	71 (11.8)	600 (100)	171 28.5
	Women	324 (51.6)	78 (12.4)	75 (11.9)	67 (10.7)	41 (6.5)	43 (6.8)	628 (100)	151 24
Region	Urban	217 (43.7)	66 (13.3)	62 (12.5)	57 (11.5)	42 (8.5)	53 (10.7)	497 (100)	152 30.6
	Rural	370 (50.5)	115 (15.7)	77 (10.5)	67 (9.2)	42 (5.7)	61 (8.3)	732 (100)	170 23.2
Age	20 ~ 29	115 (43.2)	51 (19.2)	34 (12.8)	23 (8.6)	9 (3.4)	34 (12.8)	266 (100)	66 24.8
	30 ~ 39	147 (50.3)	50 (17.1)	31 (10.6)	24 (8.2)	23 (7.9)	17 (5.8)	292 (100)	64 21.9
	40 ~ 49	133 (42.9)	41 (13.2)	44 (14.2)	33 (10.6)	36 (11.6)	23 (7.4)	310 (100)	92 29.7
	50 ~ 64	91 (47.4)	21 (10.9)	18 (9.4)	31 (16.1)	10 (5.2)	21 (10.9)	192 (100)	62 32.3
	65 ~ 74	75 (57.7)	15 (11.5)	8 (6.2)	10 (7.7)	5 (3.8)	17 (13.1)	130 (100)	32 24.6
	Over 75	23 (74.2)	1 (3.2)	3 (9.7)	2 (6.5)	0 (0.0)	2 (6.5)	31 (100)	4 12.9

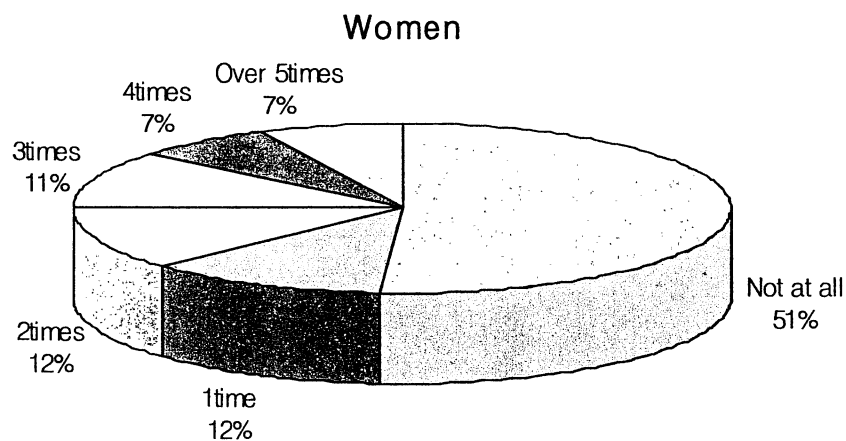
Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

* Physical activity rate means that the frequency of exercise is more than 3times per week.



<Fig 23> Present state of physical activity (per week) - Men

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006



<Fig 24> Present state of physical activity (per week) - Women

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

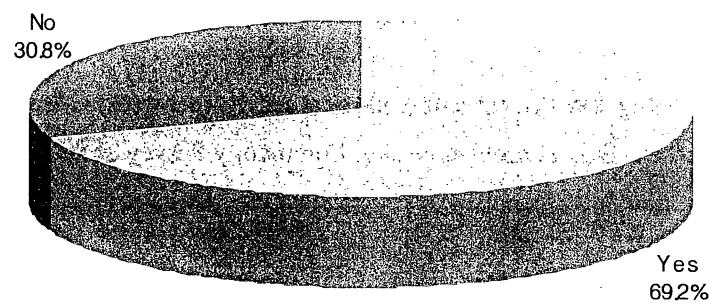
5.4 Nutrition and Oral Hygiene

A survey done on a Community Survey of Seosan City brought to light that 69.2% of respondents take regular meals, while 30.8% eats irregularly. The average number of meals per day during the last month is as follows: 72.8% of the respondents eat 3 times per day; 23.4% twice a day; 3.1% more than 4 times a day, while 0.7% answered 'only once' a day.

<Table 17> The regularity of daily eating during the last 30 days

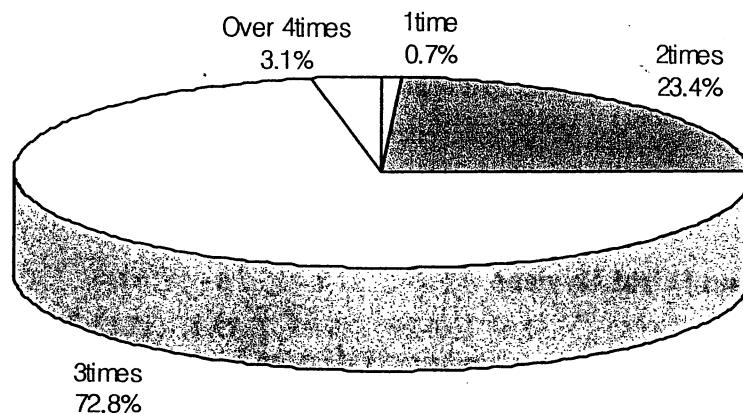
	Yes	No
Persons	853	379
Rate(%)	69.2	30.8

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006



<Fig 25> Regularity of daily eating during the last month

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006



<Fig 26> Average number of daily eating during the last month

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

6. Housing Conditions

For many years, the housing environment has been acknowledged as one of the main settings that affects human health. Living and housing conditions are the basis for many aspects that affect residential health: indoor air quality, home safety, noise, humidity and hygiene are some of the most significant health threats to be found in dwellings. It is therefore necessary to examine, not only the physical characteristics of a dwelling, such as size or dampness, but also the implicit features, such as safety or permanency of the dwelling.

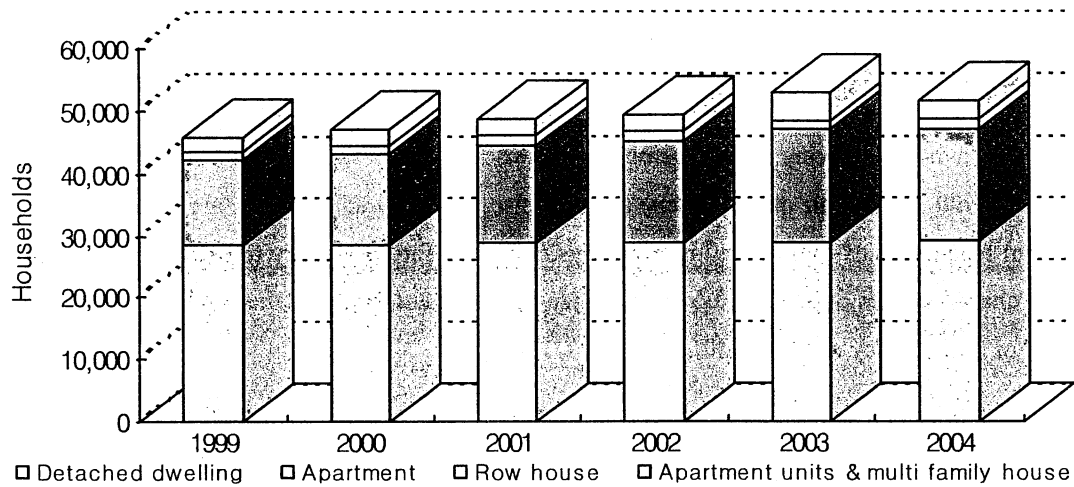
Seosan City has 53,020 houses and supply rate is an amazing 97.37%. 73.4% of Seosan's residents own their own houses and the most common type of dwelling is the apartment. In general, housing conditions in Seosan city seem to be stable.

<Table 18> Types of housing

(Unit : households, %)

Year	No. of households	Types of housing unit						
		Total	Housing supply rate	Detached dwelling	Apartment	Row house	Apartment units in private house	Multi family house
1999	48,114	47,010	97.7	28,598	13,531	1,355	2,234	4
2000	48,709	48,223	99.0	28,689	14,457	1,387	2,340	36
2001	49,906	49,771	99.7	28,741	15,688	1,499	2,425	358
2002	50,286	50,752	100.9	28,887	16,293	1,543	2,536	126
2003	53,816	54,140	100.6	28,977	17,944	1,558	2,662	1,617
2004	54,453	53,020	97.37	29,079	17,960	1,566	2,761	245

Source: Seosan City, Annual Statistics, 2005

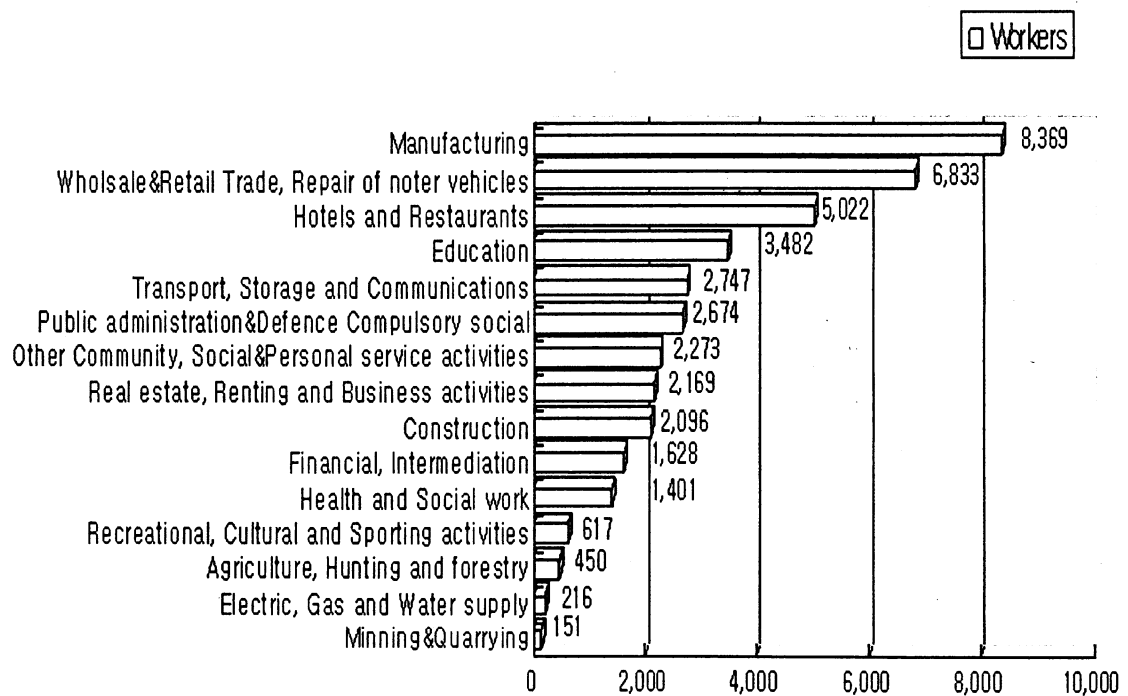


<Fig 27> Types of housing

Source: Seosan City, Annual Statistics, 2005

7. Socio-Economic Conditions

7.1 Major Industries



<Fig 28> Number of workers by industry

Source: Seosan City, Annual Statistics, 2005

According to an official report, the number of workers by industry in Seosan City was as follows. Most citizens worked in 'manufacturing' 8,369 persons in 2003, followed by people working in the 'whole sale & retail trade repair of motor vehicles' 6,833 persons, 'hotels and restaurants' 5,022 persons.

7.2 Unemployment Rate

The unemployment rate, according to the 2006 census in Chungcheongnam-do (do = for province) indicated that 2.1% of the people were registered as being economically inactive. This figure is lower than the average national unemployment rate of 3.2% (Korean Statistics Office, 2006).

<Table 19> Unemployment rate

Year	Chungcheongnam-do	Republic of Korea
2006. 5.	2.1%	3.2%

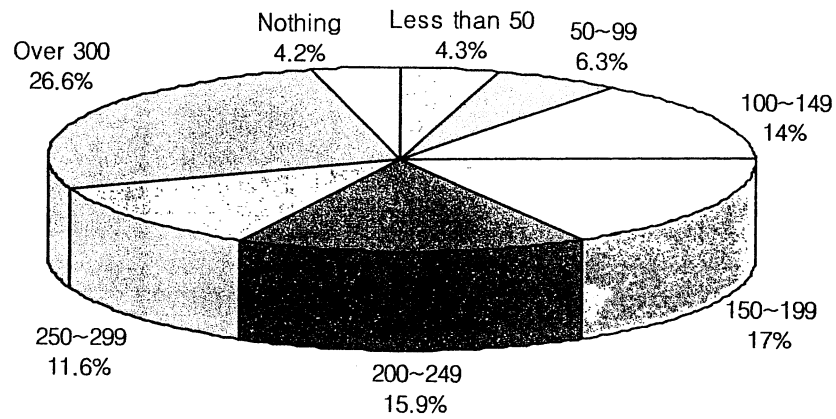
Source : Korean Statistics Office, <http://www.nso.go.kr>

7.3 Economic Status

The risk of ill health is the highest in those population groups who live under lower economic conditions. The most vulnerable groups include people with a small income, groups with older persons and disabled people. Therefore, one should consider these factors when conducting a true analysis of the citizens' health needs and health planning.

Results from A Community Survey by Yonsei University with regards to gross monthly income, showed the following: 26.9% of the respondents have an income of 3 million won per month, followed by 6.3% who have an income of 5 to 9.9 million won per month. 4.3% responded that they have a gross monthly income of up to 4.9 million won. 4.2% indicated that they had no income. Therefore, the assumption can be made that 14.8% of the respondents are in a lower economic bracket.

Unit : Thousands won



<Fig 29> Average monthly gross income per household

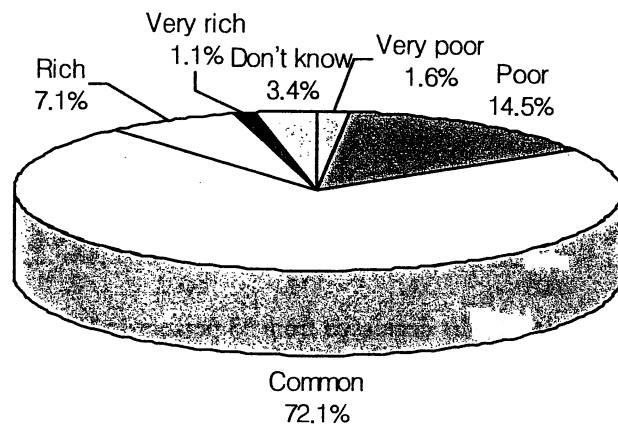
Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

Most of the participants, or 72.1%, replied 'common' about their economic status and 14.5% of the respondents expressed their economic status as being 'poor'.

<Table 20> Perception of economic status

Scale	Persons	Rate(%)
Very poor	20	1.6
Poor	179	14.5
Common	888	72.1
Rich	88	7.1
Very rich	14	1.1
Don' t know	42	3.4
Total	1,231	100.0

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006



<Fig 30> Perception of economic status

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

7.4 The Lower Income Class

<Table 21> Recipients of basic livelihood allowance benefit

(Unit: households, %)

Year	Total ¹⁾		Recipients		Recipients in facilities		Special Recipients	
	Household	Number	Household	Number	Number of facilities	Number	Household	Number
1999	1,951	4,838	1,949	4,261	2	122	-	-
2000	2,437	5,332	2,397	5,146	2	137	40	49
2001	2,465	5,084	2,389	4,821	2	143	76	120
2002	2,556	8,079	2,464	4,821	2	136	92	122
2003	2,832	5,285	2,713	5,110	2	136	119	175
2004	2,984	5,474	2,984	5,335	2	139	-	-

Source: Seosan City, Annual Statistics, 2005

note: 1) excepting unapproved facilities

The risk of ill health is the highest in those population groups who live under poor conditions. Estimates of the extent of material deprivation in Seosan City are based on statistics of people who make use of the social security benefits, and statistics of people who participate in Seosan city's social programs. According to Seosan city's annual report in 2004, 2,984 households, or 5,474 people, were recipients of the basic livelihood allowances on offer. This is a definite increase from 1,951 households, or 4,383 persons, recorded in 1999.

The number of minority householders decreased from 23 persons in 1999 to 18 persons in 2004.

<Table 22> Minority(under age) householders

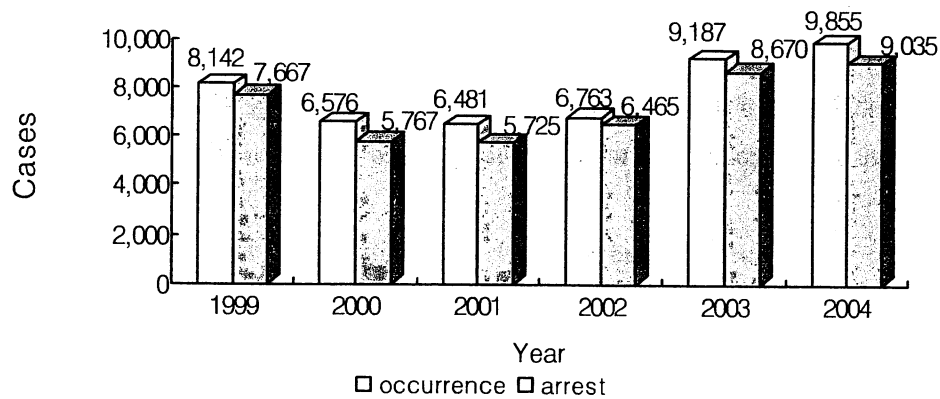
(Unit : persons)

Year	Total Householder		Classification					
			Total	Kindergarten	Primary school	Middle school	High school	Others
1999	32	23	32	1	6	9	15	1
2000	32	19	32	1	11	12	7	1
2001	32	18	32	1	11	12	7	1
2002	31	16	31	-	9	10	12	-
2003	28	19	27	-	4	11	12	-
2004	27	18	27	-	6	11	9	1

Source: Seosan City, Annual Statistics, 2005

7.5 Social Safety

Registered criminal acts in Seosan city were 9,855, an increase from 6,481 in 2001. The most prominent cases were registered as follows: extra law 7,408, followed by intellectual offenders, amounting to 1,196 cases.



<Fig 31> Criminal acts

Source: Seosan City, Annual Statistics, 2005

<Table 23> Criminal acts

(Unit : cases)

		Year					
		1999	2000	2001	2002	2003	2004
Total	Occurrence	8,142	6,576	6,481	6,763	9,187	9,855
	Arrest	7,667	5,767	5,725	6,465	8,670	9,035
Major offender	Occurrence	76	69	48	53	62	50
	Arrest	72	69	45	28	67	45
Property crimes	Occurrence	601	926	733	624	1,028	256
	Arrest	323	300	257	333	823	217
Violence	Occurrence	914	1,084	989	798	764	669
	Arrest	922	1,034	929	775	752	647
Intellectual offender	Occurrence	572	485	493	763	906	1,196
	Arrest	536	476	502	814	785	762
Others	Occurrence	1,559	1,050	989	135	208	276
	Arrest	1,495	960	956	153	218	256
Extra law offender	Occurrence	4,420	2,962	3,229	4,390	6,219	7,408
	Arrest	4,319	2,928	3,036	4,362	9,025	7,108

Source: Seosan City, Annual Statistics, 2005

7.6 Education

The educational level of a society affects a number of health deterrents, such as employment and income, and thus greatly contributes to the maintenance and promotion of health.

Several kinds of educational institutions were registered in Seosan city in 2004. A breakdown is as follows: 44 kindergartens with about 1,793 children attending per year; 36 elementary schools with 13,029 pupils; 23 secondary schools with 10,708 students; one college and 5 graduate schools. In total, 109 educational institutions and 36,342 students.

<Table 24> Educational institutions

(Unit : places, persons)

	Number	Department	Class	Number of students		
				Total	Men	Women
Total	109	1,011	1,004	36,342	20,474	15,868
Kindergarten	44	81	90	1,793	935	858
Elementary school	36	472	531	13,029	6,861	6,168
Middle school	16	202	230	6,142	3,189	2,953
High school	7	148	153	4,566	2,646	1,920
College	1	55	-	10,387	6,623	3,764
Graduate school	5	53	-	425	220	205

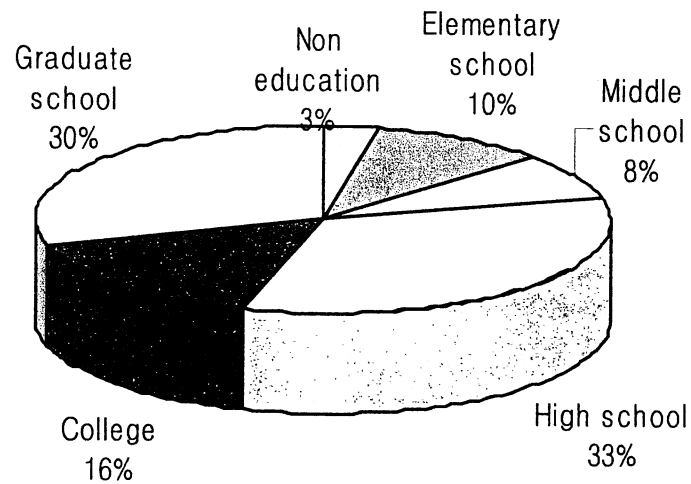
Source: Seosan City, Annual Statistics, 2005

<Table 25> Educational status

	Persons	Rate (%)
Non education	37	3.1
Elementary school	116	9.8
Middle school	98	8.3
High school	394	33.3
College	185	15.6
Graduate school	353	29.8
Total	1,83	99.9

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

Results from A Community Survey by Yonsei University showed that most participants, or 33.3% replied 'in high school' followed by 29.8% who replied 'in graduate school', and 15.6% 'in college' when asked about their education. However, 3.1% of the respondents replied with 'no education' as their answer.



<Fig 32> Educational status

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

8. Physical Environments

8.1 Air Quality

Precipitation acid quality is determined by measuring the pH value. Precipitation is considered acid if its pH factor is under 5.6. Although all regions belong to the same city, each region may experience different air quality. The level of SO₂, CO, NO₂, O₃ in Dongmun-dong(which is located in central area), as recorded in 2004, increased but the dust level decreased from recorded levels in 1999.

<Table 26> Annual average levels of air quality in a dong

Year	Dongmun-dong					Acid rain (pH)
	SO ₂ (ppm/year)	CO (ppm/8hours)	NO ₂ (ppm/year)	DUST ((μ g/m ³)/year)	O ₃ (ppm/8hours)	
1999	0.008	0.983	0.000	67.417	0.000	-
2000	0.006	0.675	0.000	77.583	0.000	-
2001	0.006	0.933	0.000	60.250	0.000	-
2002	0.006	0.958	0.020	60.583	0.026	-
2003	0.006	0.940	0.023	45.200	0.028	-
2004	0.010	1.142	0.025	46.000	0.035	-

Source: Seosan City, Annual Statistics, 2005

Statistics in 2004 show that the level of SO₂ and CO in Daesan-dokgot-lee decreased, while the level of dust and O₃ increased.

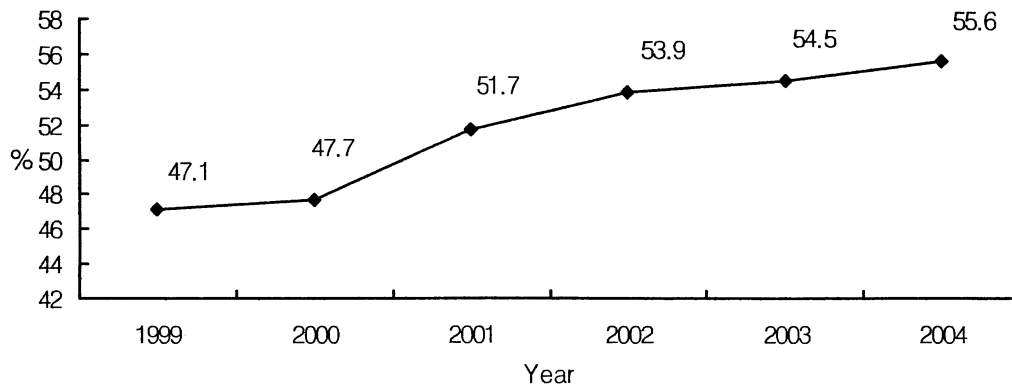
<Table 27> Average levels of air quality in an eup, myeon

Year	Daesan-dokgot-lee					Acid rain (pH)
	SO ₂ (ppm/year)	CO (ppm/8hours)	NO ₂ (ppm/year)	DUST ((μ g/m ³)/year)	O ₃ (ppm/8hours)	
1999	-	-	-	-	-	-
2000	-	-	-	-	-	-
2001	0.007	1.033	0.000	49.750	0.000	-
2002	0.007	0.658	0.015	45.417	0.030	-
2003	0.006	0.710	0.014	56.200	0.031	-
2004	0.005	0.558	0.016	54.583	0.032	-

Source: Seosan City, Annual Statistics, 2005

8.2 Water Quality

The drinking water supply network in Seosan city covered 55.6% of the city area in 2004. This figure is an increase from only 47.1% in 1999.

**<Fig 33> Distribution rate of water supply**

Source: Seosan City, Annual Statistics, 2005

An efficient water supply and effective sewage system affect the health of the population with regards to hygiene. Thus, the demand for water and sewage treatment will increase in future. It is therefore necessary that management be implemented timely. Experts should try to control the quality of waste water in the sewage system as the demand will increase drastically in the future.

<Table 28> Number of waste water treatment facilities

(Unit : places, persons)

Year	Water quality (polluted water)					
	Total	Level 1	Level 2	Level 3	Level 4	Level 5
1999	153	3	1	5	4	140
2000	165	3	1	5	6	150
2001	149	3	1	4	4	137
2002	177	5	1	3	7	161
2003	123	5	1	4	5	108
2004	140	6	2	2	11	119

Source: Seosan City, Annual Statistics, 2005

8.3 Solid Waste Management

In 2004 it was estimated that 138 tons of solid waste was generated an increase from 131 tons in 1999. The proportion of disposing waste by landfills and recycling is the most common practice in

Korea. The proportion of disposing waste by landfill decreased from 87 tons in 1999 to 70.4 tons in 2004. On the other hand, recycling increased from 43 tons in 1999 to 58 tons in 2004. Burning of waste (incineration) too, increased from only one ton in 1999 to 9.6 tons in 2004.

<Table 29> Disposal of solid waste

Year	Collection(tons)					
	Total	Landfills	Incineration	Recycling	Dumping at sea	Others
1999	131.0	87.0	1	43.0	-	-
2000	138.0	85.0	1	52.0	-	-
2001	138.0	70.0	0.5	67.5	-	-
2002	138.0	71.0	-	67.0	-	-
2003	138.0	72.5	2.5	63.0	-	-
2004	138.0	70.4	9.6	58.0	-	-

Source: Seosan City, Annual Statistics, 2005

9. Physical and Social Infra-Structure

9.1 Public Green Area

According to statements by the Public Utility Department, green areas in Seosan cover about 739.39 km². This represents about 14.79% of the total Seosan area. It has not changed significantly from 14.82% in 1999. The public green area per person is still about 0.7 m².

<Table 30> Public green area

Year	Public green area (km ²)	Whole area of Seosan City (km ²)	Rate (%)	Public green area per person (m ²)
1999	109.51	739.16	14.82	0.7
2000	109.51	739.16	14.82	0.7
2001	109.51	739.46	14.81	0.7
2002	109.51	739.48	14.81	0.7
2003	109.51	739.48	14.81	0.7
2004	109.32	739.39	14.79	0.7

Source: Seosan City, Annual Statistics, 2005

9.2 Sports Facilities

Seosan City has few sports facilities, especially for certain sports such as swimming and tennis. This includes sports facilities where international competitions could take place. Therefore, existing facilities cannot fulfill the sports and recreational needs of the citizens of Seosan City.

9.3 Communication System

The number of telephone subscribers is 54,435 persons. This represents 120.5% of the total number of people (65,600) in Seosan in 2004 who could subscribe for this service.

<Table 31> Telephone subscribers

(Unit : persons)

Year	Subscribers(person)				Public telephones
	Total	Business	Residential	Self-usage	
1999	61,169	15,645	45,000	524	1,700
2000	62,829	16,262	46,054	513	1,641
2001	64,420	17,002	47,418	502	1,539
2002	65,394	17,000	47,819	575	1,421
2003	65,543	17,042	47,920	581	1,296
2004	65,600	19,268	45,792	540	839

Source: Seosan City, Annual Statistics, 2005

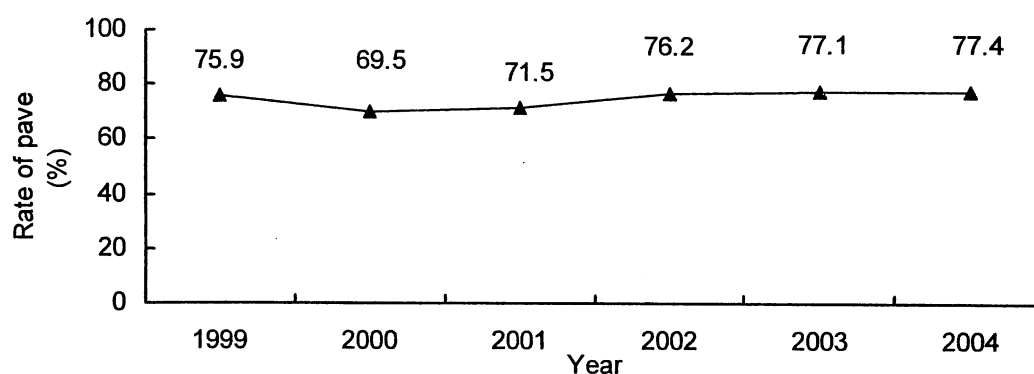
9.4 Roads

Roads are part of the basic infrastructure of modern society and thus part and parcel of a citizen's life. Roads are related to health in more than one way. Therefore, management of roads should be done bearing the concerns of the citizen's health in mind. Statistics of Seosan City in 2004 show the following about paved and non-paved roads: total area: 364,703 m²; paved roads' 282,303 m². The rate of paved to total area being 77.4%. This did not greatly change when compared to statistics in 1999. The total area of roads in 1999 represented 321,386 m². Paved roads then covered area of 243,986 m², reflecting a rate of 75.9%.

<Table 32> Rate of pave

Year	Roads(m ²)	Paved(m ²)	Rate of pave(%)
1999	321,386	243,986	75.9
2000	437,100	304,000	69.5
2001	457,386	327,086	71.5
2002	364,703	278,003	76.2
2003	364,703	281,103	77.1
2004	364,703	282,303	77.4

Source: Seosan City, Annual Statistics, 2005



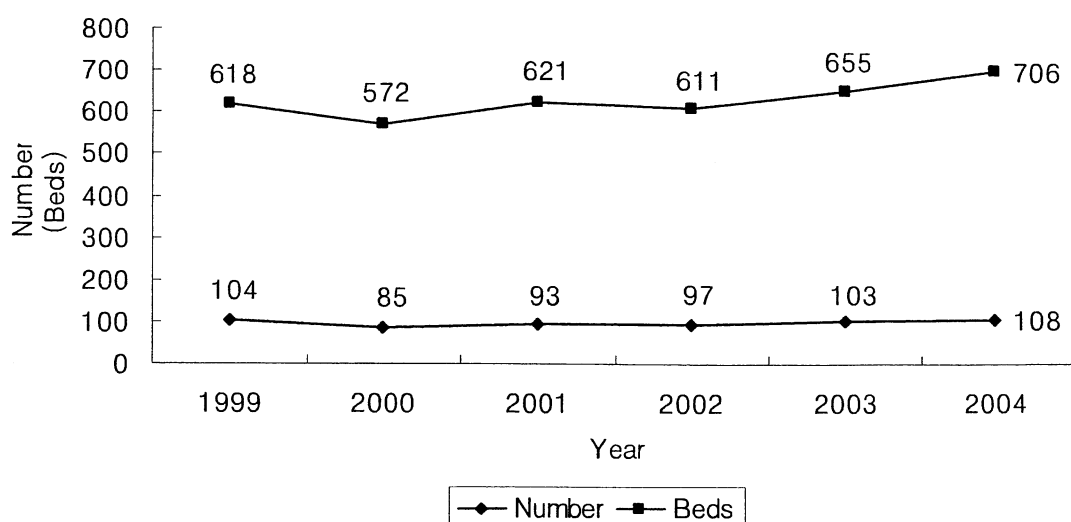
<Fig 34> Rate of paved roads

Source: Seosan City, Annual Statistics, 2005

10. Public Health Policies and Services

10.1 Health Service Facilities and Manpower

Seosan City had one general hospital, 62 clinics, 22 dental clinics, and 22 oriental medicine clinics registered in 2004. A total of 706 beds were available to patients. In addition, there were one Public Health Center, 20 Health Sub-centers and 15 Primary Health Posts.



<Fig 35> Health service facilities

Source: Seosan City, Annual Statistics, 2005

<Table 33> Health service facilities

		Year					
		1999	2000	2001	2002	2003	2004
Total	Number	104	85	93	97	103	108
	Beds	618	572	621	611	655	706
General Hospital	Number	1	1	1	1	3	1
	Beds	172	172	172	172	172	188
Hospital	Number	2	1	1	1	1	1
	Beds	143	77	77	77	77	77
Clinics	Number	67	49	55	60	61	62
	Beds	230	250	299	289	333	376
Dental Clinics	Number	22	21	20	20	21	22
Oriental Medical Clinics	Number	12	13	16	15	19	22
	Beds	73	73	73	73	73	65
Public Health Center		1	1	1	1	1	1
Health Sub-center		10	10	10	10	10	10
Primary Health Post		16	16	15	15	15	15

Source: Seosan City, Annual Statistics, 2005

Manpower involved in health services increased from 514 persons in 1999 to 618 persons in 2004. The number of physicians, increased from 81 in 1999 to 98 in 2004. The number of nurse aids increased from 184 in 1999 to 255 in 2004, and the number of medical technicians from 105 in 1999 to 117 in 2004.

<Table 34> Manpower for health services

(Unit : persons)

Year	Total	Physician		Dentist	Oriental		Nurse	Aid Nurse	Medical technician	Medical record technician	Pharmacist
		Full-time	Part-time		medical doctor	Midwife					
1999	514	81	2	27	22	1	85	184	105	3	4
2000	575	92	-	30	22	1	98	218	110	3	1
2001	516	83	-	23	24	1	95	191	96	2	1
2002	577	91	-	23	20	1	85	246	106	4	1
2003	587	92	-	24	21	1	89	247	110	2	1
2004	618	98	-	23	24	1	94	255	117	5	1

Source: Seosan City, Annual Statistics, 2005

10.2 Vaccination

<Table 35> Immunization services by public health facilities

(Unit : persons)

Year	DPT	Polio	MMR	Japanese encephalitis	Typhoid fever	Hepatitis B	BCG	Others
1999	7,357	6,054	3,789	18,338	10,565	8,769	1,890	31,274
2000	6,860	5,660	4,880	14,999	49,57	4,875	1,752	29,869
2001	6,193	6,942	2,991	9,915	3,757	4,221	1,806	28,500
2002	5,547	4,386	2,420	7,719	4,376	5,298	786	2,842
2003	5,373	4,356	2,508	6,847	3,168	4,408	806	43,290
2004	5,148	4,053	2,617	7,435	3,267	4,566	789	46,928

Source: Seosan City, Annual Statistics, 2005

According to an official report, the number of immunization services by public health facilities in Seosan City was as follows: DPT: 5,148persons, polio: 4,053persons, MMR: 2,617persons.

10.3 Health Education Services and Cancer Screening

In 2004 a number of health education programs were provided in the public health sector. 18,756 people took part in this program. About 12% of Seosan's citizens participated in the community health education programs. It seems that his effort decreased from 125,593 participants in 2000.

<Table 36> Participants of health education program

(Unit : persons)

Year	Total	Groups education						Individual education
		Pre-school children	Student	Employees	Reserved army	Elderly people	Others	
2000	125,593	1,718	112,075	665	1,318	2,891	6,589	337
2001	130,032	1,707	116,753	624	1,200	4,191	5,144	413
2002	38,750	3,456	7,120	11,861	766	2,617	5,755	7,175
2003	37,987	2,431	13,858	1,626	-	12,368	23,574	19,666
2004	18,756	550	5,127	69	-	4,165	6,312	557

Source: Seosan City, Annual Statistics, 2005

In 2004 the Public Health Center of Seosan City has provided cervical cancer screening to 327 and breast cancer screening to 1,312 citizens.

<Table 37> Cervical and breast cancer screening

(Unit : persons)

Year	Cervical cancer screening	Breast cancer screening
2004	327	1,312

Source: Public Health Center of Seosan City, 2005

10.4 Epidemics

To prevent the introduction, transmission, and spread of communicable diseases in the country, the government has made several relevant supporting regulations to curb these, and communicable diseases, called legal communicable diseases. The incidence of registered legal communicable diseases in Seosan city are as follows: Typhoid fever, one case; mumps, 13cases and scrub typhus, 61cases. A total of 75 cases of legal communicable diseases were reported. Therefore, to prevent this, strengthening health education with regards to hygiene and acceptable sexual behavior, is needed.

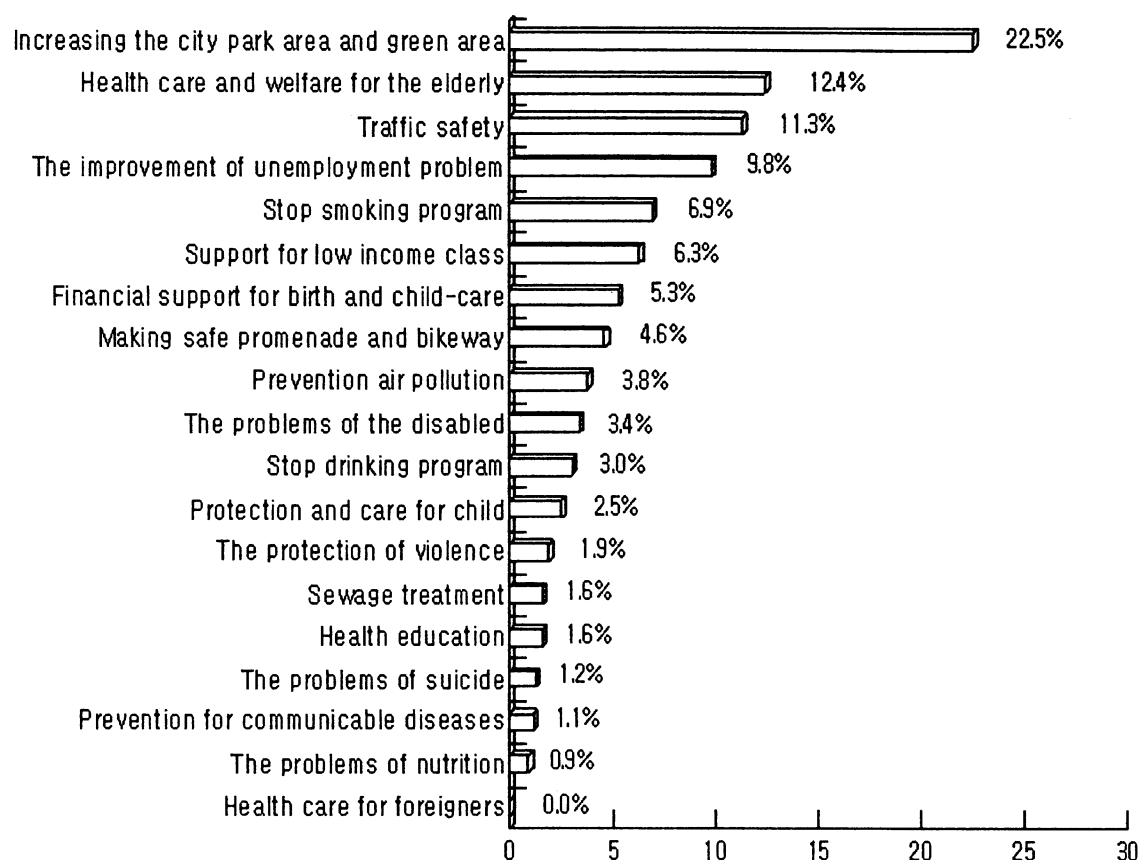
10.5 Accidents

According to an official report, the main cause of accidents involved pedestrians. 872 cases were reported in 2004. It was followed by 95 fire related cases, a decrease from 221 cases in 2000. Incidences of forest fires also showed a decline from 10 cases in 2000 to only 3 in 2004. However, the number of traffic accidents did not change significantly. To prevent these accidents, various approaches should be implemented. Education, by means of safety education specialists who deal with the safety of a city, definitely is necessary to lower incident rates.

11. Priorities of a Healthy City Program Selected by Seosan Citizens

A Community Survey of Seosan City, indicating the priorities of a healthy city program chosen by the citizens of Seosan city, brought the following to light. 22.5% of the responses, or the highest percentage, answered that the 'increasing the city park area and green area' is the number one priority for them. The second highest priority on the respondents' agenda was 'health care and welfare for the elderly', which weighed in at 12.4%. 'Traffic safety' was selected by 11.3% of the responses and ranked third on the list of priorities. 'The improvement of unemployment problem' was presented by 9.8% of the responses as the priority, and thus placed fourth. 'Stop smoking program', chosen by 6.9% of people, came in at number five on the list of priorities.

N = 1,233



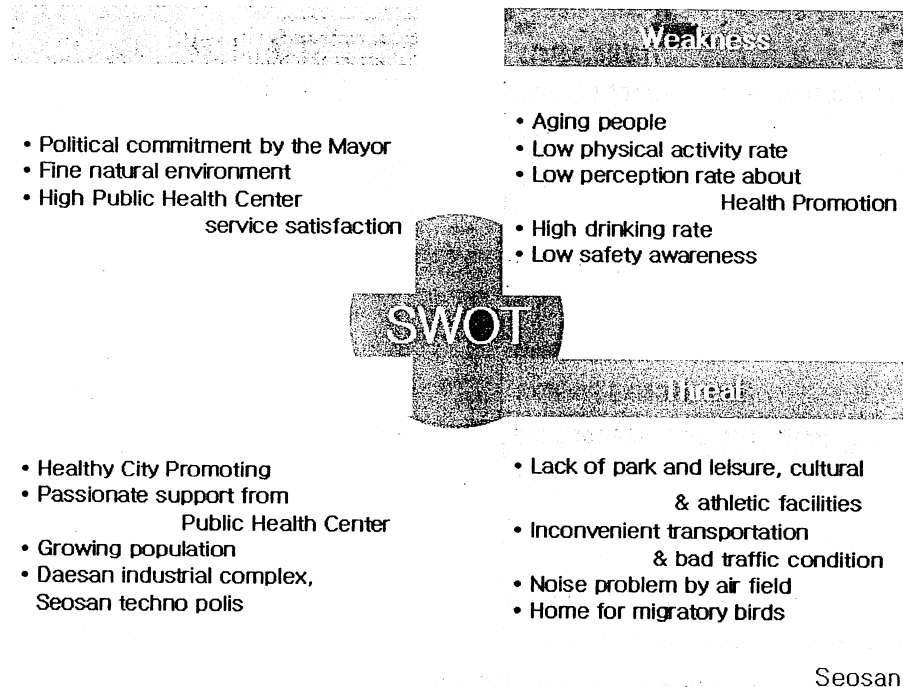
<Fig 36> The priority of healthy city program selected by Seosan citizens

Source: Seosan City, Yonsei University, Community Survey of Seosan City, 2006

12. SWOT Analysis

Fig 37 shows the strength, weakness, opportunity and threat of Seosan City. This analysis gives us concise information about the present condition of Seosan City, so that the city can get some idea for the development of the Healthy City Project. Most of the analysis is based on a community survey conducted by Seosan City and Yonsei University in 2006.

SWOT Analysis



<Fig 37> SWOT analysis

12.1 Strength

12.1.1 Political Commitment by the Mayor

The mayor of Seosan City is required to have a strong mind, because it needs supports from various parts of the city to become a Healthy City.

12.1.2 Fine Natural Environment

Natural environment considerably influences human health, and Seosan City, located near the Yellow Sea, has a good condition with mountains and fields.

12.1.3 High Satisfaction with Services of Public Health Centers

In the community survey, 138(26.2%) answered that they were very satisfied, 266(50.6%) were

satisfied and 109(20.7%) were neither satisfied nor dissatisfied with services of public health centers. Thus more than three quarters of respondents were satisfied with the services of public health centers.

12.2 Weakness

12.2.1 Aging of the Population

A society is called aging society and aged society when the elderly population accounts for more than 7% and 14% of the total population, respectively. Seosan City is becoming an aged society and 12.4% of the population is over 65 years old in 2004.

12.2.2 Low Physical Activity

Seosan City has lower physical activity rates than those in Wonju City. In Seosan City, 28.5%(171) of men and 24.0%(151) of women do physical activities, while these figures increase to 55.6%(193) and 47.2%(264) in Wonju City, respectively (<http://healthycity.wonju.go.kr>).

12.2.3 Low Rate of Perception about Health Promotion

Only 37.6%(454) of respondents in the community survey have heard or have been educated about health promotion. It is necessary to raise the recognition of citizens about health promotion program.

12.2.4 High Drinking Rate

The rate of people who have drinking habits is 68.3% in Seosan City, which is slightly higher than 64.4% in Chungcheongnam-do and 67.1% of the national average

12.2.5 Low Awareness of Safety

Even though it is obligatory to fasten a seatbelt when driving a car, only 67.1%(602) of respondents in the community survey followed it when they sat on a driver's seat, and the figure dropped to 57.8%(670) for side seats. Moreover, 33.7%(303) of the drivers who had driven a car or a motorcycle more than once experienced driving after drinking in the previous 365 days.

12.3 Opportunity

12.3.1 Healthy City Promotion

Seosan City has been preparing for becoming a member of WHO Healthy City Alliance and promoting the Healthy City Project.

12.3.2 Passionate Supports from the Public Health Centers

Public health centers play an important role in the maintenance and promotion of citizens' health, and their supports would greatly help the city to become a Healthy City.

12.3.3 Growing Population

After having rapidly decreased in 1985-1990, the population of Seosan City has been gradually increasing since 1995.

12.3.4 Daesan Industrial Complex, Seosan Technopolis

Daesan Industrial Complex and Seosan Technopolis will trigger economic growth and the influx of population and create jobs. It is expected that the annual sales will be 2.8 billion won and around 32,900 persons will come to the city when Seosan Technopolis is built.

12.4 Threat

12.4.1 Lack of Parks and Other Facilities for Leisure and Cultural and Athletic Facilities

Citizens think that a priority should be given to having more parks and green spaces to make Seosan City as a Healthy City. Also 52.0(639)% of respondents in the community survey answered that there was no place for kids to play around their residential areas and 55.4%(681) responded that there was no place to spend leisure time.

12.4.2 Inconvenient Transportation & Bad Traffic Condition

In the community survey, 54.6%(671/1230) answered that the transportation was inconvenient in

residential areas. Most of them cited the bad traffic condition as a reason why they did not like Seosan City.

12.4.3 Noise from an Air Field

Citizens cannot sleep well at night with the noise of airplanes landing and taking off an airfield in Seosan City. The noise has also killed some livestock.

12.4.4 Home for Migratory Birds

Although Seosan City is one of the biggest homes for migratory birds, it is possible that they get citizens infected with bird flu or another problem, which would interfere in the community development. Once the Ministry of Environment approves Seosan City as the first place with good ecological environment, it will become difficult to develop the city.

13. Conclusion

These Seosan City Health Profiles were written, with reference to the WHO's City Health Profiles, using Seosan city's annual statistics and a community survey of Seosan City. A community survey of Seosan City was done in order to obtain statistics about the level of health of Seosan city by Yonsei University in 2006. Statistics were obtained from a representative sample of 540 households. Conclusions, taking the selection of priorities from a detailed healthy city program by its citizens in consideration, are as follows:

1. Preparation of health care and welfare for the elderly is needed. In 2004 Seosan's elderly (over 65years), constitute about 12% of Seosan's population. It is higher than the national average. It surely shows that Seosan is an ageing society. Priorities, selected by Seosan city's residents, placed health care and welfare for the elderly second. Preparation of health care and welfare for the elderly, taking economics in consideration, is necessary.

2. Health promotion programs, especially stop smoking programs, should be implemented constantly to involve citizens in securing healthy lifestyles. Although there is no direct data to be found about the smoking rate in Seosan city in 2005, there is indirect data, such as statistics of tobacco consumption taxes which showed an increase Seosan city's collected tobacco consumption taxes. The citizens of Seosan city furthermore placed the priority of smoking programs fifth in their list of

priorities. When implementing healthy city programs, basic health education should be provided to citizens to enable them to care for their own health. The best deterrent in most cases is the citizens themselves.

3. Countermeasures are asked for to improve the unemployment problem. The Community Survey of Seosan City, showed that nearly 15% of the total households get below one million won per month. To solve this problem, various approaches are necessary. For example, the expansion of public works, stimulation of the economy and vocational education.

4. This writing also shows that increasing city park and green areas is necessary. In 2005 the green area of Seosan represented only 15% of the total area of Seosan. It is thought to be too little to secure the health of its residents and to promote a better quality of life. Easily accessible city park areas and green areas are needed in the citizen's daily lives. Even if they are small, city park areas and green areas near residential areas and work places will be better than placing them on the outskirts of the city.

5. The expansion of health related facilities in Seosan City, especially sports facilities, is necessary for the citizen's well-being. There are an abundance of reports that regular exercises lead to a low incidence rate of various diseases, especially cerebrovascular diseases. The opposite of this statement is also true. Therefore, one can assume that regular physical activities are important to maintain good health. However, A Community Survey of Seosan City, showed that about half the respondents do not engage in physical activities. The answer to this is not easy, but officials can start by implimenting better facilities and to manage them properly.

6. Nowadays, a concern for safety is increasing, and safety management has become more essential. Traffic accidents in Seosan city still tops all other accidents, and the citizens want to prioritize traffic safety. Therefore, in getting to the crux of the matter, education in safety might supply satisfactory answers.

7. Finally, the implementation of statistics management is required to effectively secure healthy city programs and other related programs. Statistics that could provide concrete evidence for the implementation and evaluation of programs are not only necessary, but also essential. Gathering of statistics about the unemployed and vaccination of all citizens should be done frequently to examine levels of the economical and health status of Seosan city's residents.

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