

# III. Yongsan-gu Healthy City Profile

## 1. The areas of healthy city profile

### 1) Population

- The number of total population, age group by 5 years old, population density, households, Infant and preschooler, children and teenagers, youths and middle-agers, seniors, the rate of senior population, aged population index, total dependency ratio, annual migrant rate, the number of foreigners

### 2) Health status

- Birth index (birth rate, rates of low birth weight, standard prenatal care rate, breast-feeding rates), death index (crude death rate, suicide death rate, death rate of nationally notifiable communicable diseases, maternal mortality rate, Infant mortality rate, car accident death rate, cancer death rate, stroke death rate), incidence rate index (incidence rate of nationally notifiable communicable diseases, incidence rate of cardiovascular and cerebrovascular diseases, incidence rate of tuberculosis), prevalence rate index (prevalence rate of chronic diseases, prevalence rate of depression, prevalence rate of dental diseases, prevalence rate of senile dementia), personal health state (personal health state)

### 3) Life style

- Smoking index (smoking rate-male/female, starting age of smoking, The rate of second smoking-house), drinking index (alcohol consumption per an adult, alcohol consumption-adults, the rate of risky drinkers, the rate of people who experienced drunk driving, starting age of alcohol consumption) drug abuse index(the frequency of teenager crimes, the frequency of drug offenses), exercise index (exercise indicator, the rate of walking), nutrition index (the rate of adult obese population, the rate of skipping breakfast)

#### 4) Housing

- Housing supply rate, density of house, the number of people per a household, the number of households per different house styles, housing units based on type of occupancy, residential satisfaction.

#### 5) Physical environment

- Weather condition index (average daily temperature, monthly precipitation, average daily sunshine duration, annual fog day frequency, tropical night frequency), air quality index (sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone, acid rain, Fine dust), water quality index (river water temperature, hydrogen ion concentration, dissolved oxygen, biochemical oxygen demand, chemical oxygen demand, suspended solid), water supply and sewage management index (water supply rate, Sewage supply rate, water supplied population, water supply capacity, amount of sewage treatment, quality of water discharged from sewage treatment, amount of sludge, cost of sewage treatment), waste management index (amount of waste, amount of waste disposal, general waste landfill), noise index (noise pollution in commercial district/industrial district/residential area, noisy facilities), natural disaster (annual frequency, number of the afflicted, PTSD counseling for the victims)

#### 6) Socio-economic status

- Economic activity (basic livelihood security recipients rate, the number of population in each industry, unemployment rate), education index (level of education, the number of schools by education level, the number of students by education level, the number of schools against population, enrollment rate of high schools), safety index (number of crimes/violences/car accidents/crack down on drunk driving, rate of seat belt fastening, fire occurrence by causes, performance of 119 rescue activity), cultural index(the number of cultural space-performance facilities/exhibitions/museums, the number of gymnasiums, the number of library, computer penetration), Industrial population composition (the number of businesses/sex workers), social participation and isolation (the number of women's counselling, voting rate)

## 7) Fairness

- Income equality (regional Gini coefficient), low income group (basic livelihood security recipients, single senior citizens ages 65 and older, registered disabled people, senior couples ages 65 and older, children without parents, low income single parent family, medical allowance recipients), health condition comparison index (health indicator related with income/residential area)

## 8) Physical infrastructure

- Road index (road extension, pavement extension, road pavement rate, the number of people per one registered car, regional sidewalk area, bicycle road), public transport index (the share of public transportation), city development index (reconstruction, slum management, the number of redevelopment plans on commercial area, the number of redevelopment), communications (the number of telephone subscribers, the volume of mail delivery, internet penetration rate), green space (rate of land use, the number of parks)

## 9) Public health policy and service

- Medical security and utilization (the number of health insurance subscribers, the number of outpatients by medical institutions, the number of hospitalization by medical institutions, the utilization of community health centers), medical facilities (the number of medical institutions), human resource (the number of medical personnel), medical costs (total medical cost, health insurance receipts of each medical institution), health and welfare budget (welfare budget, per capita health and social development cost), health education and business (the number of education by health education organizations, the number of individual health education, new registration rate of maternal and child health care, maternal and child health care education completion rate, the number of vaccination, check-up rate of top 5 cancers), social welfare facilities (the number of social welfare facilities, leisure and welfare facilities for senior citizens, residential and medical welfare facilities for senior citizens, community senior service facilities, women welfare facilities, child welfare facilities, child care facilities, registration rate of nursing homes compared to senior population)

## 2. Status of each healthy city profile section

### 1) Population

- A total number of Yongsan-gu population is 251,043 with 12,819 foreigners. The number of household stands at 106,966 and the senior population aged 65 and more accounts for 11.3% of the total population.

		Total	251,043	Korean	238,224
Total number of population				Male	116,781
				Female	121,443
The number of population by age group (Foreigners are excluded.)	0~10			23,131	
	11~20			25,175	
	21~30			40,021	
	31~40			47,373	
	41~50			38,028	
	51~60			28,960	
	61~70			21,148	
	71~80			10,967	
	81~90			3,081	
	91~100			334	
	101 and older			6	
Population density	10,892(person/km <sup>2</sup> )				
The number of households	106,966				
Seniors (65 and older)	26,850				
The rate of senior population	11.3%				
The number of foreigners	12,819				

## 2) Health status

- The number of newborn babies is 2,525 while the low birth weight rate is 3.7% and the breast feeding rate stands at 25.0%. The incidence and death rate of nationally notifiable communicable diseases is near at 0%. But the prevalence rates of hypertension, diabetes, depression and dental diseases are 14.9%, 5.3%, 8.0% and 23.7%, respectively. About 50.0% of the residents think they are healthy.

Birth index	Birth rate	2,525
	Rates of low birth weight	3.7%
	Standard prenatal care rate (2005)	93.8%
	Breast-feeding rates (2005)	25.0%
Death index	Crude death rate	-
	Suicide death rate	-
	Death rate of nationally notifiable communicable diseases	0.0%
	Maternal mortality rate	-
	Infant mortality rate	-
	Car accident death rate (per 100,000 people)	-
	Cancer death rate (per 100,000 people)	-
	Stroke death rate (per 100,000 people)	-
Incidence rate index	Incidence rate of nationally notifiable communicable diseases	0.002%
	Incidence rate of cardiovascular and cerebrovascular diseases	-
	Incidence rate of tuberculosis	0.024%
Prevalence rate index	Prevalence rate of chronic diseases (hypertension, diabetes)	Hypertension 14.9% Diabetes 5.3%
	Prevalence rate of depression(2008)	8.0%
	Prevalence rate of dental diseases (2005)	23.7%
	Prevalence rate of cancer(2008)	9.9%
Personal health state	Personal health state (2008)	Healthy 50.0%

### 3) Life style

- The smoking rates of male and female stand at 50.1% and 4.6%, respectively. Male starts smoking at 19.6 years old while female starts it at 27.3 of age on average. The exposure rate for second-hand smoking at home is 20.2%. The adult drinking rate for male is 75.9% and female rate 32.5%. The excise rates for male and female are 13.0% and 7.1%, respectively. The male obese population is 29.5% while the female counterpart is 10.9%.

Smoking index	Smoking rate	Male 50.1%, Female 4.6%
	Starting age of smoking	Male 19.6, Female 27.3
	The rate of second smoking (house)	20.2%
Drinking index	Alcohol consumption per an adult	-
	Alcohol consumption(adults)	Male 75.9%, Female 32.5%
	The rate of risky drinkers	Male 41.2%, Female 16.3%
	The rate of people who experienced drunk driving	-
	Starting age of Alcohol consumption	Male 18.7, Female 21.9
Drug abuse index	The frequency of teenager crimes	-
	The frequency of drug offenses	-
Exercise index	Exercise indicator	Male 13.0%, Female 7.1%
	The rate of walking	Male 53.5%, Female 43.4%
Nutrition index	The rate of adult obese population	Male 29.5%, Female 10.9%
	The rate of skipping breakfast (2005)	47.4%

#### 4) Housing

- Housing supply rate is 102.3% and the number of people per a household is 2.23. The most popular housing type is apartment, followed by detached house and multi-unit house while the most popular house occupancy type is house owning.

Year 2007		
Housing supply rate	102.3%	
Density of house	-	
The number of people per a household(2008)	2.23(238,224/106,966 household)	
The number of households per different house styles	Total	57,606
	Detached house	10,688
	Multi-family house	6,918
	Apartment	25,762
	Row house	3,138
	Multi-unit house	10,580
	Non-residential building	684
Housing units based on type of occupancy(2005)	Total	76,125
	Owning house	30,065
	Tenement	27,399
	Monthly rent with variable deposit	14,388
	Monthly rent without deposit	1,882
	Monthly rent	529
Free rent	1,862	
Residential satisfaction	-	

## 5) Physical environment

- Daily average temperature is 13.3°C and annual precipitation is 1,212.3mm. Daily average sunshine duration is 5.06 hours while annual fog day frequency is 4 days. Water and sewage supply rate is 100%.

Weather condition index	Average daily temperature	13.3(°C)								
	Monthly precipitation	Total	1,212.3(mm)							
		January	10.8							
		February	12.6							
		March	123.5							
		April	41.1							
		May	137.6							
		June	54.5							
		July	274.1							
		August	237.6							
September		241.9								
October	39.5									
November	26.4									
December	12.7									
	Average daily sunshine duration	5.06 hours								
	Annual fog day frequency	4 days								
	Tropical night frequency	-								
Air quality index	Sulfur dioxide (ppm/yr)	-								
	Carbon monoxide (ppm/8hrs)	-								
	Nitrogen dioxide (ppm/yr)	-								
	Ozone (ppm/8hrs)	-								
	Acid rain	-								
	Fine dust (PM10)	-								
	Stream	Jung-rang	Pal-dang dam	Jung-reung	Dorim	Cheong-gye 1	Cheong-gye 3	Gaewha	Woo-i	
Water quality index	River water temperature (°C)	16.6	16.6	17.3	19.5	16.6	16.6	4.4	23.3	
	Hydrogen ion concentration(Ph)	7.8	7.8	7.7	7.7	7.8	7.7	7.7	8.3	
	Dissolved oxygen (mg/l)	10.2	10.2	10.2	9.4	10.2	10.2	13.4	13.3	
	BOD (mg/l)	4.0	3.9	3.9	3.2	3.9	3.9	6.8	2.9	
	COD (mg/l)	5.1	5.1	5.1	4.8	5.1	5.1	6.1	4.7	
	Suspended solid (mg/l)	8.6	8.5	8.8	8.9	8.6	8.6	8.7	5.8	



Water supply and sewage management index	Water supply rate	100(%)
	Sewage supply rate	100(%)
	Water supplied population(2008)	238,224(person)
	Water supply capacity	99,510(m3/day)
	Amount of sewage treatment	140,325(ton/day)
	Quality of water discharged from sewage treatment	-
	Amount of sludge	369(m3/day)
	Cost of sewage treatment	29,822 (million Won)
Waste management index	Amount of waste	1,006 (ton/day)
	Amount of waste disposal	1,006 (ton/day)
	General waste landfill	14 cases
Noise pollution index	Commercial district	-
	Industrial district	-
	Residential area	-
	Noisy facilities	7
Natural disaster	Annual frequency	1
	Number of the afflicted	0
	PTSD counseling for the victims	-

## 6) Socio-economic status

- Basic livelihood security recipients rate is 1.65%. The economic activity participation rate is 62.8% and unemployment is 4.0%. The enrollment rate of high school is 73.6%. Most of crimes and violences have been resolved. The number of car accident, fire and 119 emergency activity is 39,360, 224 and 18,035, respectively. The number of cultural space and facilities for physical activity is 26 and 212, respectively.

Socio-economic status				
Economic activity index	Basic livelihood security recipients rate	3,934 (people) / 1.65%		
	The number of population in each industry	Total economically active people	5,148 people (Economic activity participation rate 62.8%)	
		All industries	104,442 (people)	100.0%
		Farming/fishing	28	0.027%
		Mining/manufacturing	3	0.003%
		SOC and other business services	95,117	99.970%
Unemployment rate	4.0%			
Education index	Level of education	-		
	The number of schools by education level	Preschool	16	
		Elementary school	15	
		Middle school	9	
		High school	10	
		Special school	1	
		College/University/Graduate school	1	
		etc.	2	
	Total	54		
	The number of students by education level	Preschool	1,714	
Elementary school		11,767		
Middle school		6,324		
High school		9,979		
Special school		104		
College/University/Graduate school		12,344		
etc.		812		
Total	43,044			

	The number of schools against population	-		
	Enrollment rate of high schools	73.6%		
Safety index	Number of crimes	(reports) 355,735, (arrests) 315,886		
	Number of violences	(reports) 74,020, (arrests) 70,926		
	Number of car accidents	39,360(cases), 118(per 10,000 cars)		
	Number of crack down on drunk driving			
	Rate of seat belt fastening	85.4%(Male 85.6%, Female 84.9%)		
	Fire occurrence by causes	Total	224	
		Electricity	47	
		Gas exposure	1	
Car accident		2		
Carelessness		63		
Arson		47		
Etc.	64			
	Performance of 119 rescue activity	Called out 18,035(case), Handling 12,775(case)		
Cultural index	The number of cultural space(performance facilities/exhibitions/museums)	26		
	The number of gymnasiums	212		
	The number of library			
	Computer penetration	-		
Industrial population composition	The number of businesses	20,027		
	The number of workers by sex	-		
Social participation & isolation	The number of women's counselling	-		
	Voting rate	-		

## 7) Fairness

- There are 3,934 basic livelihood security recipients, 8,543 registered disabled people, 2 households of children without parents, 782 households of low income single parent family and 4,887 medical allowance recipients.

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Income equality index	Regional Gini coefficient	-
Low income group	Basic livelihood security recipients	3,934
	Single senior citizens ages 65 and older	4,183
	Registered disabled people	8,543
	Senior couples ages 65 and older	-
	Children without parent	2
	Low income single parent family	299 households /782 people
	Medical allowance recipients (2008)	4,887
Health condition comparison index	Health indicator related with income	-
	Health indicator related with residential area	-

## 8) Physical infrastructure

- Road pavement rate is 100% and the number of people per one registered car is 3.07. The number of parks is 47.

Road index	Road extension	279,175m	
	Pavement extension	279,175m	
	Road pavement rate	100%	
	The number of people per one registered car(2008)	3.07 (238,224 people/73,166cars)	
	Regional sidewalk area	-	
	Bicycle road(2008)	10.28 km/8 areas (exclusive-0.29, multiple-9.99)	
Public transport index	The share of public transportation	Railway	(On-boarding) 200,645,117
			(Off-boarding) 202,148,411
		Subway	2,598,437
City development index	Reconstruction, slum management, The number of redevelopment plans on commercial area	-	
	The number of redevelopment	-	
Communications	The number of telephone subscribers		
	The volume of mail delivery	62,774,000 (Domestic), 281,000 (International)	
	Internet penetration rate	-	
Green space	Rate of land use	-	
	The number of parks(2008)	47	

## 9) Public health policy and service

- The number of medical institutions and personnel are 286 and 2,617, respectively. The registered number of pregnant women and babies are 1,098 and 2,751, respectively on a annual basis. There are 26 social welfare facilities, 2 child welfare facilities, 2 maternal welfare facilities, 5 Leisure and welfare facilities for senior citizens, 12 residential and medical welfare facilities for the disable, and 5 the other facilities.

Medical security and utilization	The number of health insurance subscribers (2005)	226,129	
	The number of outpatients by medical institutions	110,727,658	
	The number of hospitalization by medical institutions	1,358,792	
	The utilization of community health centers	-	
Medical facilities	The number of medical institutions (2008)	Total	286
		General hospital	3
		Hospital	2
		Clinic	115
		Dental clinic	103
		Oriental hospital	63
		Health center	1
Human resource	The number of medical personnel (2008)	Total	2,736
		Doctor	632
		Dentist	138
		Oriental medicine doctor	80
		Midwife	12
		Nurse	888
		Nurse aides	426
		Medical technician and the others	560
Medical cost	Total medical cost	-	
	Health insurance receipts of each medical institution	6,827,592,371 won	
Health and welfare budget	Welfare budget	Social security costs	
		Health & medical care	
	Per capita health and social	311,171 won	

	development cost		
Health education and business	The number of education by health education organizations	-	
	The number of individual health education	Pregnant women registration	47,468
		Child registration	26,334
	New registration rate of maternal and child health care	Health check-up business for pregnant women	1,098
		Health check-up business for children	2,751
	Maternal and child health care education completion rate	Health check-up business for pregnant women	419
		Health check-up business for children	68
	The number of vaccination	36,729	
Check-up rate of top 5 cancers	-		
Social welfare facilities	The number of social welfare facilities	26 (children 2, female 2, disabled 12, senior 5, etc. 5)	
	Residential and medical welfare facilities for the disable	12	
	Leisure and welfare facilities for senior citizens	5	
	Community Senior Service Facilities	2	
	Women welfare facilities	2	
	Child welfare facilities	2	
	Child care facilities	97	

### 3. Healthy city business evaluation index

#### 1) City environment

Socio-economic environment		City environment				
Socio-economic environment	Regional economy vitalization	The number of population in each industry	Total economically active population	5,148 (Economic activity participation rate 62.8%)		
			All industries	104,442 100.0%		
			Farming & fishing	28 0.027%		
			Mining	3 0.003%		
			SOC & other business services	95,117 99.970%		
	Unemployment rate		4.0%			
	Transport and safety	Number of car accidents		39,360(cases), 118(per 10,000 cars)		
		Number of crack down on drunk driving		-		
		Number of unfastening car seat be		-		
		Fire occurrence by causes	Total		224	
			Electricity		47	
			Gas exposure		1	
			Car accident		2	
			Carelessness		63	
			Arson		47	
		Etc.		64		
	Performance of 119 rescue activity		Reports 18,035(cases), Handling 12,775(cases)			
	Disaster occurrence/damage		-			
	Housing	Housing supply rate		102.3%		
		Density of house		-		
The number of people per a household		2.23 (238,224 people/106,966 households)				
The number of households per different house styles		Total		57,606		
		Detached house		10,688		
		Multi-family house		6,918		
		Apartment		25,762		
		Row house		3,138		
		Multi-unit house		10,580		
Non-residential building		684				
Housing units based on type of occupancy	Total		76,125			
	Owning house		30,065			
	Tenement		27,399			
	Monthly rent with variable deposit		14,388			
	Monthly rent without deposit		1,882			
	Monthly rent		529			
Free rent		1,862				



		Residential satisfaction	-		
		Level of education	-		
	Education	The number of schools by education level(2008)	Total	54	
			Preschool	16	
			Elementary school	15	
			Middle school	9	
			High school	10	
			Special school	1	
			College/University/Graduate school	1	
		etc.	2		
		The number of students by education level	Total	43,044	
			Preschool	1,714	
	Elementary school		11,767		
	Middle school		6,324		
	High school		9,979		
	Special school		104		
	College/University/Graduate school		12,344		
	etc.	812			
		The number of schools against population	-		
		Enrollment rate of elementary school/middle school/high schools	Elementary school	100.0%	
			Middle school	99.4%	
			High school	73.6%	
Physical environment	Parks and shelters	Land usage rate	-		
		The number of parks	47		
	Roads and sidewalks	Road extension	279,175m		
		Pavement extension	279,175m		
		Road pavement rate	100%		
		The number of people per a registered car(2008)	3.07 (238,224 people/73,166 cars)		
		Regional sidewalk occupancy	-		
		The share of public transportation	Railway	(On-board) 200,645,117	(Off-board) 202,148,411
			Subway	2,598,437	
			Bicycle road	-	
	Cultural space	The number of performance facility, exhibition, museum	26		
		Number of gymnasium	212		
		The number of library	3		

		Computer penetration rate	-		
	Public sanitation	The record of installing public toilets	-		
Natural environment	Noise pollution	Commercial district	-		
		Industrial district	-		
		Residential area	-		
		Noisy facilities	7		
	Air quality management	Sulfur dioxide (ppm/yr)	-		
		Carbon monoxide (ppm/8hrs)	-		
		Nitrogen dioxide (ppm/yr)	-		
		Ozone(ppm/8hrs)	-		
	Waste	Amount of waste	1,006(ton/day)		
		Amount of waste disposal	1,006(ton/day)		
		General waste landfill	14 cases		
	Weather	Average daily temperature	13.3(°C)		
		Monthly precipitation	Total	1,212.3(mm)	
			January	10.8	
			February	12.6	
			March	123.5	
April			41.1		
May			137.6		
June			54.5		
July			274.1		
August			237.6		
September			241.9		
October			39.5		
November			26.4		
December	12.7				
	Average daily sunshine duration	5.06 hours			
	Annual fog day frequency	4 days			
	Tropical night frequency	-			

## 2) Living Environment

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Household	Female	Low income single-mother family	782		
		Female welfare facilities	2		
	Maternal and child health care	New registration rate of maternal and child health care	Pregnant women registration	1,098	
			Child registration	2,751	
		Maternal and child health care education completion rate	Health check-up business for pregnant women	419	
			Health check-up business for children	68	
		Birth rate	2,525		
		Rates of low birth weight	3.7%		
		Standard prenatal care rate (2005)	93.8%		
	Breast-feeding rate (2005)	Breast-feeding only 25.0%			
	Maternal mortality rate	-			
	Infants	Infant mortality rate	-		
	Seniors	Single senior citizens ages 65 and older	4,183		
		Senior couples ages 65 and older	-		
		Leisure and welfare facilities for senior citizens	5		
		Community Senior Service Facilities	77		
Registration rate of nursing homes compared to senior population		-			
Disabled	Registered disabled people(2008)	8,543			
Nursery & school	The number of schools by education level	Preschool	16		
		Elementary school	15		
		Middle school	9		
		High school	10		
		Special school	1		
		College/University/Graduate school	1		
		etc.	2		
	Total		54		
	Nursery facility & school environment	The number of students by education level	Preschool	1,714	
			Elementary school	11,767	
Middle school			6,324		
High school			9,979		
Special school			104		
College/University/Graduate school			12,344		
etc.			812		
Total		43,044			
	Child care facilities	2			
	Nursery facilities	97			

### 3) Healthy life style

Smoking	Non-smoking	Smoking rate	Male 50.1%, Female 4.6%
	Smoking prevention	Starting age of smoking	Male 19.6, Female 27.3
		The rate of second smoking(house)	20.2%
Drinking	Addiction management	The rate of people who experienced drunk driving(2005)	6.6%
		The number of car accidents related with drunk driving	-
	Temperance	Alcohol consumption per an adult	-
		Drinking rate(adult)	Male 75.9%, Female 32.5%
		The rate of risky drinkers	Male 41.2%, Female 16.3%
Nutrition	Nutrition management	The rate of adult obese population	Male 29.5%, Female 10.9%
		The rate of skipping breakfast (2005)	47.40%
Excercise	Supporting system	Excercise rate	Male 13.0%, Female 7.1%
		The rate of walking	Male 53.5%, Female 43.4%
	Facility	Regional sidewalk occupancy rate	-
		Land use rate	-
		Bicycle road	10.28 km, 8 areas
		The number of parks	47
Sex life	STD prevention	Prevalence of AIDS	-
Stress management	Mental health	Experience rate of depression	male-5.8%, female-10%
		Perception rate of individual stress	male-40.7%, female-37.8%

#### 4) Health/medical service

[Redacted]				
Medical access	Access system	The population covered by health insurance	226,129	
	Facility/equipment	The number of medical institutions (2008)	Total	286
			General hospital	3
			Hospital	2
			Clinic	115
			Dental clinic	103
			Oriental hospital	63
			Health center	1
			Health sub center	-
	Facility/equipment	Number of medical personnel (2008)	Total	2,736
Doctor			632	
Dentist			138	
Oriental medicine doctor			80	
Midwife			12	
Nurse			888	
Nurse aides			426	
Medical technician and the others			560	
Vulnerables	Medical allowance recipients (2008)	4,887		
Disease prevention & control	Prevention	The number of vaccination	36,729	
		Check-up rate of top 5 cancer	-	
	Communicable disease	Death rate of nationally notifiable communicable diseases	0%	
		Prevalence rate of nationally notifiable communicable diseases	0.002% (4 cases)	
	Oral health	Prevalence rate of dental checkups	29.7%(male-26.3%, female-33%)	
		Prevalence rate of dental disease	29%(male-26.7%, female-31.2%)	
Emergency medical service	Emergency medical service	Death rate of car accident	-	
		Prevalence rate of accident poisoning	4%(male-4.8%, female-3.3%)	
Long-term treatment & rehabilitation	Facility/equipment	Community Senior Service Facilities (2008)	5	