## WHO HEALTHY CITY "GWANGJU DONG-GU"



2007





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## Declaratory Statement of "WHO Healthy City Dong-gu, Gwangju"

Our Dong-gu is not only a traditional and historic site of Gwanju but also has played a very important role of Honam, and is a place where the warmth of Moodeung mountain was turned into the accomplishment of the 5.18 democratization at Geumnamno to establish it as a place of the international human rights city.

Therefore, we are declaring the following to build "Healthy city Dong-gu, Gwangju" which valued the spirits of WHO constitution by gathering capabilities of all the entities in order to remove physical and social health damaging factors on the premise that maintaining the best health conditions for our residents of Gu is our basic right and duty.

- 1. Recognize pursuit of health as one of the basic rights, and remove damaging factors for health from all areas.
- 2. In developing health related public policies including health check programs, concentrate capabilities of local society by establishing networks by inducing voluntary participations from citizens and social organizations and sharing information.
- 3. Develop and initiate diverse health policies to enhance quality of life, and promote health fairness by providing preferred caring for the alienated classes including especially seniors and people with disabilities.
- 4. Share health visions with world health cities, and aim for health city Dong-gu, Gwangju that can maintain a harmony of respect for human lives and nature.

June 22th, 2007

The Mayor of Dong-gu, Gwangju Metropolitan City

\_\_\_\_\_

#### Vision of

## "WHO Healthy City Dong-gu, Gwangju"

Building Health City Dong-gu, Gwangju where all the residents of gu enjoy elegant healthy cultural lives as the owner of the center city of Asian culture by maintaining the best conditions for health in an ecological city that is formed in harmony with nature.

#### Goal of

## "WHO Healthy City Dong-gu, Gwangju"

Not only being free from damaging factors for health by responding to demands of Gu residents, but build health oriented ecological city where nature and people are in harmony, and aggressively cope with new challenges due to aging, initiate "Heaven for seniors, dong-gu, Gwangju" and further initiate "Health City of Dream, Dong-gu, Gwangju" where all the residents enjoy high quality of life in a healthy environment.

### - Key Initiative Strategy -

- o Initiating City Administration where people and nature are in harmony
- Promote high quality culture, arts and tourism in a health social environment
- o Promote education and daily physical exercise for health future
- o Promote warm medical health social welfare
- Self-governing administration for maintaining the best health for all the residents of Gu

# Health Profile of "Gwangju Dong-gu"



## 1. GENERAL INFORMATION

## (1) Regional Characteristics

ong-gu which played the role of central area as the patriotic city of long tradition and the city of art is located at 127°E and 35°N.L. It adjoins Buk-gu on the north, Hwasun-gun on the south, has the Gwangju stream on the west and is under the Mt. Moodeung. It has the area of 48.87 km² (9.7% of Gwangju-si area) and 139,533 people (10.5% of Gwangju-si population).

Its major business items are 6,030 wholesale, retail, consumer goods repair shops, 3,928 accommodations and restaurants and 1690 manufacturers centering around Chungjang-ro and Kumnam-ro, 139 government and public offices, 54 financial agencies and 58 educational organizations and it has played the key roles of Gwangju. Although the population has been decreased due to the housing construction and development at outskirts of downtown, cavitation of downtown area has been emerged due to the separation of workplace and residential space and the floating population is increased and the administrative demands such as cleaning, traffic and environment is rapidly increasing.

Dong-gu concentrates on maintaining the living environment to cope with these and promoting the native art and life education with the projects like the security of residential and leisure space, making green city and downtown art festival to improve the living conditions.

It also has about 20 kinds of national treasures and tangible and intangible cultural properties as the city of art and the street of art which was designated in 1987 and has 73 galleries, exhibition halls and other art related items. In addition, Chunsulhun at Mt. 151, Unlim-dong, Dong-gu, Gwangju is the place where Euijae Huh Baek-Ryun, the master of Namjonghwa, a painting of the southern school did his best for creating artistic works and cultivating successors through life and the Chunsulcha tea cultivated by him is the local special product of this region.

We, Dong-gu in the harmony of the modernness and the tradition are doing best to establish the foundation of local autonomy with competitiveness, improve the quality of life, make the comfortable environment, realize the service administration for residents and succeed and develop the traditional culture.

## (2) Brief History

Three-country	O Multiplica					
Age	○ Mujinju					
940	○ Gwangju					
1895	○ Gwangju-kun					
1949. 8. 15	○ Gwangju-city					
1973. 7. 1	<ul> <li>Dong-ku, Gwangju-city was established at (7-1 kumnam-ro2-ka, Gwangju) accordance with the Presidential Decree No. 6544Proclaimed on Mar. 12. 1973)</li> <li>Execution of ward(district) system: Started with the integration of Jung-bu, Dong-bu and Buk-bu branch offices</li> </ul>					
1979. 1. 1	<ul> <li>Two administrative dongs were established in accordance with municipal Ordinance No.844(Nov. 15. 1978)</li> <li>Sansu 2-dong -&gt; Sansu 2-dong and Sansu 3-dong</li> <li>Junghung-dong -&gt; Junghung 1-dong and Junghung 2-dong</li> </ul>					
1979. 5. 1	<ul> <li>One administrative dong was established in accordance via page 5.1</li> <li>Municipal Ordinance No.886(Proclaimed on Apr.26.1979)</li> <li>Jisan-dong -&gt; Jisan 1-dong and Jisan 2-dong</li> </ul>					
1980. 4. 1	<ul> <li>Jurisdictional district was changed due to the establishment of Puk-ku Ward Office, Gwangju in accordance with the Presidential Decree No.886(Proclaimed on Sep. 26. 1979)</li> <li>Yangnim-dong, Banglim 1-dong and 2-dong -&gt; Seo-ku</li> <li>8 dongs of Sukkok branch office, Junghung 1-dong and 2-dong -&gt; Puk-ku</li> </ul>					
1985. 11. 1	<ul> <li>○ Administrative dongs were integrated in accordance with the Municipal Ordinace No.1384(proclaimed on Oct. 28. 1985)</li> <li>■ Seosuk 1-dong and 2-dong -&gt; Seosuk-dong</li> </ul>					
1986. 11. 1	O Gwangju city was promoted to Gwangju Jikhalshi in accordance with Law No.3808(Proclaimed on May 8, 1985)					
1988. 5. 1	Promoted to self-governing district					
1994. 3. 28	O Dong-ku Ward Office moved (#31 Seosuk-dong)					

1994. 12. 26	<ul> <li>The boundary of self-governing district was adjusted according to the Presidential decree No.14434(proclaimed on Dec. 22, 1994)</li> <li>Partial area of duam 1-dong, Buk-ku(8,477 m²) and that of Punghyang 1-dong(102 m²) were included in Sansu 3-dong</li> <li>Partial area of Sansu 3-dong(8,393 m²) was included in Duam 1-dong, Puk-ku</li> </ul>
1995. 1. 1	<ul> <li>Gwangju Jikhalshi was changed into Gwangju Gwangyukshi according to the Law No. 4789(proclaimed on Dec. 20, 1994).</li> <li>Dong-ku, Gwangju → Dong-ku, Gwangju Gwangyukshi</li> </ul>
1996. 10. 30	New Construction of Dong-ku Ward Office
1998. 7. 1	O Inauguration of the second popularly elected mayor of Dong-gu
2002. 7. 1	O Inauguration of the third popularly elected mayor of Dong-gu
2006. 7. 1	O Inauguration of the fourth popularly elected mayor of Dong-gu

## (3) Symbols

#### 1) Symbol mark



With the motive of magpie's wing, it symbolizes powerful and great flying the 'Bitgoeul Dong-gu' in the 21<sup>st</sup> century, representing the vision of Dong-gu through nature-friendship and future-oriented.



It symbolizes the Hoping city of Donggu of youthful passion and vitality through abstractive representation of the sun, the symbol of Dong-gu.



It symbolizes the information of Donggu, which is leading information society in this times.



It symbolizes the Culture city of Donggu, which have three elements of human being, nature and culture with harmony and mutualism.

#### 2) Character(Geumname)



Having Geumnam General Jeongchungsin as its motive, we have reorganized the hard and stereotyped image of general into modern senses to express it as the character filled with dream, hope, freedom and youthfulness. 'Geumname' plays a role of representing Dong-gu with a Character that gives dreams and hopes to children and induces adults to find child in themselves.

#### 3) County tree: Ginkgo



It is used as a shade tree by the road side at major roads including Kumnamro street and is strong to cold and pollution. It symbolizes the strong will of Dong-gu people.

#### 4) County flower: Royal Azalea



It grows spontaneously in Mt. Mudeung, gives the intimacy to people with its vivid colors and stands for the 5.18 Democratic Uprising of Gwangju, the holy place of democratizetion.

#### 5) County bird: Magpie



It is very familiar bird which can see everywhere in Korea and is the symbol of good luck.

## (4) Location & Area

#### 1) Location

Gwangju Metropolitan city that includes Dong-gu is located in the center of Honam region which occupies the southwest of Korean peninsular. As a center city for a vast area including entire Jeonnam area and Namwon, Sunchang, Jeongeup and Gochang, it is displaying its function.

Gwanju which is a center city of Homan region in the west and major cities in Yeongnam region including Busan, Dague and Ulsan in the east are in correspondence with Sobaek Mountain rage in between.

Although geographically Gwangju is located a bit north of the center of Jeollanamdo, because it is located near the center of entire Honam region, it plays a role of a base city of economics, administration, education and culture of this region including parts of Jeonbuk region in the north.



Chart 1. Location of Gwangju metropolitan city (Gwangju Metropolitan City Office website, 2007)



Chart 2. Gwangju metropolitan city administrative district map (Gwangju Metropolitan City Office Webpage, 2007)

#### 2) Area

The entire area of Dong-gu for 2005 is  $48.87 \, \text{km}^2 (48,866,802 \, \text{m}^2)$ , and forests and fields account for 71.1% [Table 1]. Entire area of Gwangju Metropolitan City is  $501.31 \, \text{km}^2$  and Dong-gu accounts for 9.8% of the entire area.

Looking at the overview of dong-gu per land classification, forests and fields occupy the most area with 34.75 km²(71.1%) and followed by grounds 4.90 km² (10.0%), roads 2.3 km²(4.6%) in that order.

Table 1. Gwangju metropolitan city administrative district (Gwangju Metropolitan City Office Webpage, 2007)

District	District Area(km²)		Legal dong Administrative Dong		Ban
Total	501.31	201	91	2,287	10,977
Dong-gu	48.87	34	13	165	930
Seo-gu	46.73	17	17	419	2,124
Nam-gu	61.08	30	16	380	1,705
Buk-gu	121.75	41	26	761	3,877
Gwangsan-gu	222.88	79	19	562	2,341

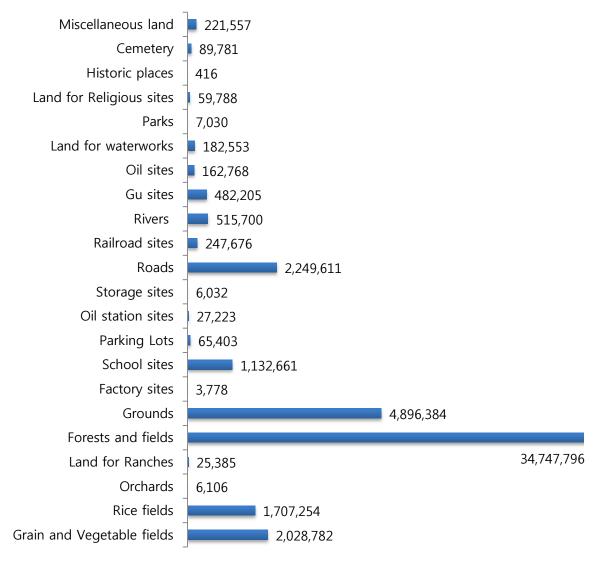


Chart 3. Overview of land per classification (Dong-gu Statistical Yearbook, 2006)

### (5) Administration

1) Goal of Dong-gu

"Building new Dong-gu, Center of Asian Culture"

#### 2) Main Initiated Policies



Initiate Dynamic Urban revitalization Plans



Proceed with exciting Urban Developments



Promote Elegant Culture and Arts



Promote education and daily Physical exercise programs for the future



Enhance Warm medical health and social welfare programs



Self-government administration together with residents

#### 3) Administrative District

Administrative district for Dong-gu is comprised of 13 administrative districts, 165 tongs, 930 dongs, and Jiwon 2-dong is the largest in area with 27.60km², and Gyerim 2-dong is the smallest with 0.40km². [Table 2] shows information per administrative district.

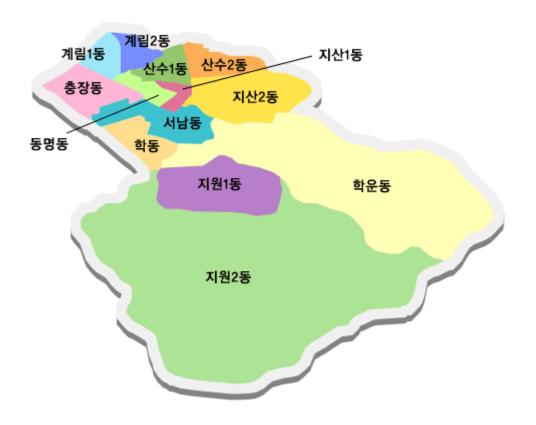


Chart 4. Dong-gu administrative map (Dong-gu Office Webpage, 2007)

충장동 Chunjang-dong 산수1동 Sansu 1-dong 산수2동 Sansu 2-dong 지산1동 Jisan 1-dong 동명동 Dongmyeong-dong 학동 Hak-dong 서남동 Seonam-dong

계림1동 Gyerim 1-dong 계림2동 Gyerim 2-dong

지산2동 Jisan 2-dong 지원1동 Jiwon 1-dong

시원1용 Jiwon 1-dong

학운동 Hakwoon-dong

지원2동 Jiwon 2-dong

Table 2. Dong-gu administrative district

Administrative dong districts	Area (㎞)	Legal dong districts in the jurisdiction	Tong/Ban	Address of dong office	Telephone number
13 dong districts	48.86		165 / 930	Dong-gu office : 1 Donggucheong-ro (31 Seoseok-dong)	(062)608-2114
Chungjang-dong	1.13	Daein-dong, Jang-dong, Gung-dong, Daeui-dong, Geumnamro 1~5 st, Chungjang-dong 1~5 st, Bullo-dong, Hwanggeum-dong, Honam- dong, Sugi-dong	15 / 45	7-1 Geomnam-ro 2 ga 1 (20 Geumnam-ro)	(062)225-1950
Dongmyeon-dong	0.43	Dongmyeong-dong	10 / 59	156-4 Dongmyeong- dong (19 Dongmun 3 gil)	(062)225-1953
Gyerim 1-dong	0.51	Gyerim-dong	15 / 81	178-38 Gyerim-dong (57 Gyerim 3 gil)	(062)225-1955
Gyerim 2-dong	0.40	Gyerim-dong	12 / 78	195-2 Gyerim-dong (113 Gyerimjetdeung- gil)	(062)225-1957
Sansu 1-dong	0.73	Sansu-dong	17 / 93	541-10 Sansu-dong (8 Banwal 5-gil)	(062)528-0120
Sansu 2-dong	0.72	Sansu-dong	15 / 96	512-3 Sansu-dong (190 Janwon 1 gil	(062)228-4454
Jisan 1-dong	1.01	Jisan-dong	10 / 55	448-49 Jisan-dong (8 Jisan-gil)	(062)225-1961
Jisan 2-dong	1.60	Jisan-dong	8 / 53	232-46 Jisan-dong (97 Jiho-ro)	(062)225-1962
Seonam-dong	1.34	Gwangsan-dong, Bullo-dong, Nam-dong, Geum-dong, Seoseok-dong, Jang-dong, Hak-dong	10 / 55	29 Seoseok-dong (38 Donggucheong-ro)	(062)225-1966
Hak-dong	1.88	Hak-dong	17 / 80	901-308 Hak-dong (3 Hakcheon 3-gil)	(062)225-1968
Hakwoon-dong	10.19	Hak-dong, Ullim-dong	14 / 104	720-10 Hak-dong (155 Uijae-ro)	(062)225-1970
Jiwon 1-dong	1.32	Sotae-dong, Yongsan-dong	9 / 65	656 Sotae-dong (70 Sotae 1-gil)	(062)222-1461
Jiwon 2-dong	27.60	Sotae-dong, Yongsan-dong, Walnam-dong, Naenam-dong, Seongyo-dong, Yongyeon- dong	13 / 66	269-1 Yongsan-ro (499Hwasan-ro)	(062)222-1683

#### 4) Administrative Organizational Structure

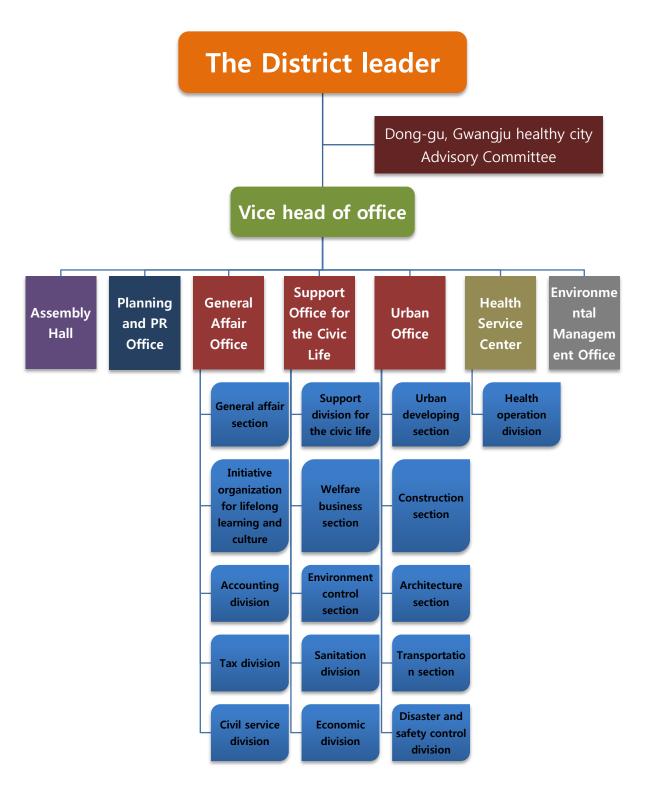


Chart 5. Dong-gu office administrative organizational structure (Dong-gu office webpage, 2007)

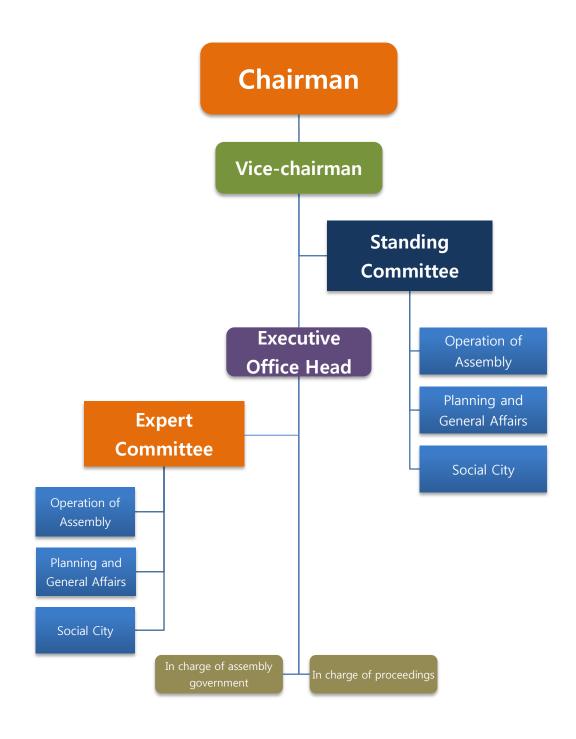


Chart 6. Dong-gu assembly organizational structure (Dong-gu Assembly website, 2007)

## 5) Budget

Table 3. Budget size per accounting 2006 (Dong-gu Office webpage, 2007)

	By Accounting	This year's budget	Last year's budget	Change	Change (%)
	Total	101,469	89,620	11,849	13.2
	General Accounting	95,499	86,279	9,220	10.7
Special accounting		5,970	3,341	2,629	78.7
	Health insurance fund management	200	60	140	235.0
	Residence income support and living stability fund	1,282	1,224	58	4.7
	Building sites	28	34	-6	-17.0
	Parking lot special accounting	4,460	2,023	2,437	120.5

Table 4. Revenues and expenditures budget overview of 2006

,	Accounting	Total	General accounting	Special accounting
	Total	101,469	95,499	5,970
	Local tax revenue	8,324	8,324	0
	Other revenue	14,647	11,021	3,626
	Operating revenue fr sources outside of tax	om 7,623	7,575	48
	Temporary revenue fr sources outside of tax	<sup>om</sup> 7,024	3,446	3,578
Dovonuos	Local grant	6,000	6,000	0
Revenues	Revenue Source Adjust	ing 27,387	27,387	0
	Subsidy	43,532	41,188	2,344
	National subsidy	22,394	22,253	141
	Municipal expense subs	dy 21,138	18,935	2,203
	Municipal bond	1,578	1,578	0
	Operating budget	40,206	39,287	919
	Labor cost	28,826	28,252	574
	Operating expense	11,380	11,035	345
	Business budget	57,836	53,621	4,215
Evpandituras	Supporting business	47,674	44,419	3,255
Expenditures	Self business	10,162	9,202	960
	Redemption of debt	1,133	1,133	0
	Reserve fund etc	2,293	1,457	836
	Reserve fund	1,830	1,002	828
	Others	464	455	9

## (6) Climate

#### 1) Temperature

Dong-gu, Gwangju Metropolitan City has a lot of precipitation due to Jeju Oceanic Current(Yellow Sea Oceanic Current) and low pressure that is moving from the Southwest, and as it is located at the boundary of Jeonnam field and Namryeong Moutain area, its climate is mixture of the both regions.

The annual average temperature is 13.6°C, and difference in seasonal temperature is 26.2°C as the January average temperature is 0.0°C and the August average temperature 26.1°C

Precipitation is 1,289mm annually and 18% of it is during a period from March to May and 59% of it is during a period from June to September, and number of rainy days per year is 133 days.

For wind, it's mostly northwesterly and westerly winds, and in summer time, due to affect of Moodeung mountain area which is blocking the southeast direction, its' mostly southerly and westerly winds. Seasonal wind is northwesterly seasonal wind for winder and southwesterly seasonal wind for summer same as other regions.

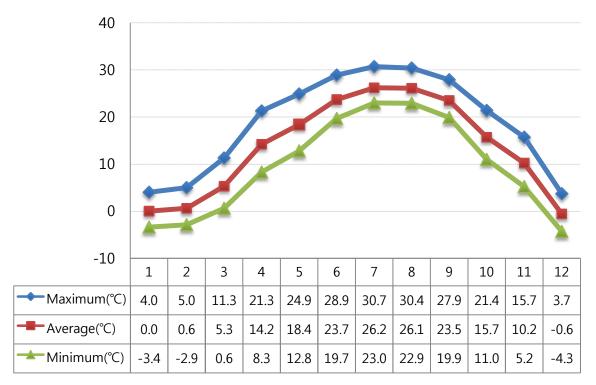


Chart 7. Distribution of temperature per month (Dong-gu Statistical Yearbook, 2006)

#### 2) Precipitation

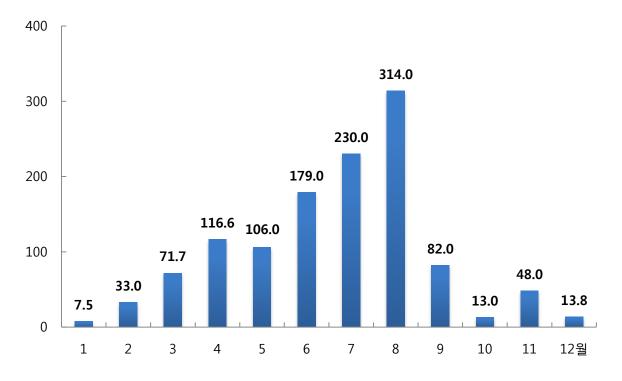


Chart 8. Precipitation per month (Dong-gu Statistical Yearbook, 2006)

## (7) Population

#### 1) Total population

Although Dong-gu has played a role of heart of Gwangju Metropolitan city with concentration of commercial, entertainment, business and educational facilities, as sub-city zones are formed according to the multi-core city policy of Gwangju metropolitan city, City communal systemization phenomenon is deepened including decrease in population, and moving population is relatively increasing.

Although population of Dong-gu, Gwangju Metropolitan city was up to 300,000 people in the 70s, it has steadily decreased, and population as of 2006 is 47,393 households, 114,939 people(57,110 males, 57.826 females) and in 2007, population is 47,401 households with 112,863 people(56,215 Males and 56,649 females).

Number of households per year had steadily decreased but it has started to increase since 2001, but population per household has been continuously decreasing[Chart 10].

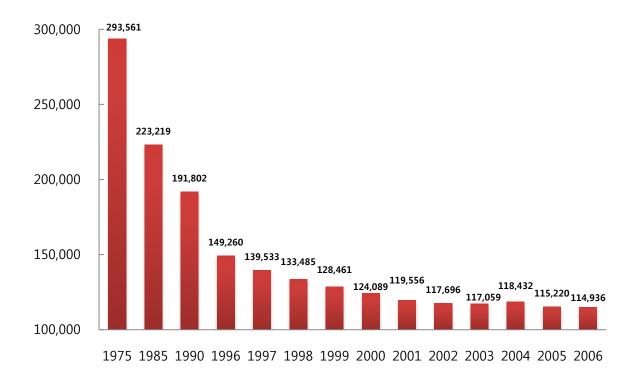


Chart 9. Population trend by year (Dong-gu Statistical Yearbook, 2006, Dong-gu office webpage)

Dong-gu has the lowest population among 5 Gus of Gwangu Metropolitan city, and lowest in population density after Gwangsan-gu. Number of households is also the lowest and population per household also is the lowest among the five gu districts.

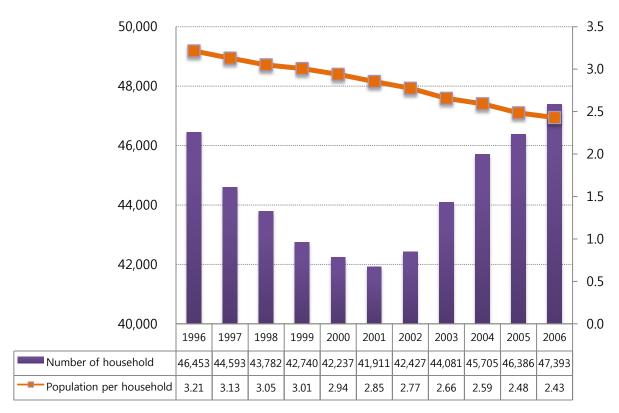


Chart 10. Households(number of families) by year and trend of population per household (Dong-gu Statistical Yearbook, 2006)

Senior population of Dong-gu was over 10,000 in 2000 and has been growing since then, and as of 2005, senior population is at 12.606 people accounting for 10.9% of total population, and this trend is expected to continue.

When you compare it with other Gu district of Gwangju metropolitan city, although number of senior population is the lowest, that is because total population is lower than other gu districts, but percent(%) of senior population is significantly higher than the average of entire Gwangu metropolitan city(99,455) and other gu districts, thus aging of population is progressing faster than other gu districts.

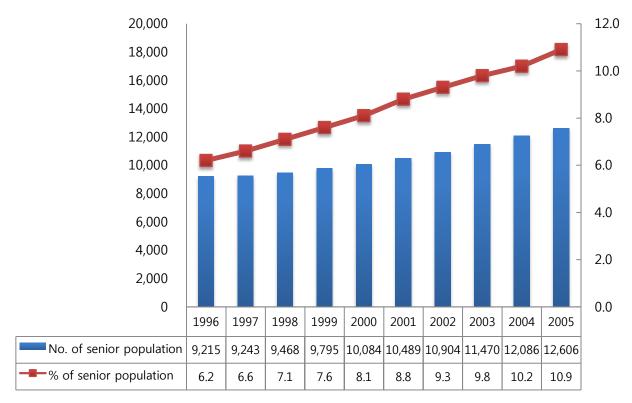


Chart 11. Senior population over 65 years old (Dong-gu Statistical Yearbook, 2006)

Table 5. Trend of population and composition of people over 65 years old per gu district (Community Health and Medical Plan, Dong-gu, Phase 4)

unit : person (%)

Classification	Population of p	Population of people over 65 years old (composition)								
Classification	2001	2003	2005							
Dong-gu	10,489 (8.8)	11,470 (9.8)	12,606 (10.9)							
Seo-gu	15,988 (5.3)	19,391 (6.1)	20,169 (6.5)							
Nam-gu	15,126 (6.6)	16,903 (7.9)	18,089 (8.4)							
Buk-gu	25,373 (5.3)	29,264 (6.4)	30,614 (6.7)							
Gwangsan- gu	13,970 (5.3)	16,034 (5.6)	17,976 (5.8)							

Table 6. Size of population and population density by dong district, number of households and population per household (Community Health and Medical Plan, Dong-gu, Phase 4)

District	Tota	ıl	mal	е	fema	ale	Popul Den	lation sity	Numbe houset		Populat house	
District	How many	%	How many	%	How many	%		How many	%	How many	%	How many
Chungjang-	6,381	5.57	3,303	5.80	2 001	5.35	1 071	1 21	2 021	6.5	0.01	6.87
dong	0,301	5.57	3,303	5.60	3,081	5.35	4,871	1.31	3,021	0.5	2.21	0.07
Dongmyeong-	6,545	5.71	3,273	5.75	3,275	5.69	15,221	0.43	2,966	6.4	2.22	6.91
dnog	0,545	5.71	3,273	5.75	3,273	5.09	13,221	0.43	2,900	0.4	2.22	0.91
Gyerim 1-	9,032	7.89	4,423	7.76	4,612	8.02	17,710	0.51	4,248	9.2	2.15	6.69
dong	9,032	7.09	4,423	7.70	4,012	0.02	17,710	0.51	4,240	9.2	2.10	0.09
Gyerim 2-	8,706	7.60	4,258	7.47	4,426	7.69	21,765	0.40	3,226	7.0	2.71	8.43
dong	0,700	7.00	4,230	7.47	4,420	7.03	21,703	0.40	0,220	7.0	2.71	0.40
Sansu 1-dong	10,888	9.51	5,455	9.57	5,426	9.43	14,916	0.73	4,558	9.8	2.40	7.46
Sansu 2-dong	12,228	10.68	5,988	10.52	6,229	10.83	16,983	0.72	4,480	9.7	2.74	8.52
Jisan 1-dong	5,865	5.12	2,943	5.16	2,925	5.08	5,807	1.01	2,531	5.5	2.33	7.25
Jisan 2-dong	6,810	5.95	3,417	6.00	3,406	5.93	4,256	1.60	2,705	5.8	2.53	7.87
Seonam-dong	5,870	5.13	2,868	5.03	3,015	5.24	4,381	1.34	2,729	5.9	2.17	6.75
Hak-dong	9,189	8.02	4,538	7.96	4,644	8.07	4,888	1.88	4,151	9.0	2.22	6.90
Hakwoon- dong	14,424	12.59	7,112	12.48	7,315	12.71	1,441	10.01	4,940	10.7	2.93	9.12
Jiwon 1-dong	9,798	8.56	4,936	8.66	4,865	8.45	7,423	1.32	3,387	7.3	2.90	9.02
Jiwon 2-dong	8,789	7.67	4,469	7.84	4,323	7.51	318	27.61	3,342	7.2	2.64	8.21
Total	114,525	100	56,983	100	57,542	100	2,343	48.87	46,386	100	32.15	100.0

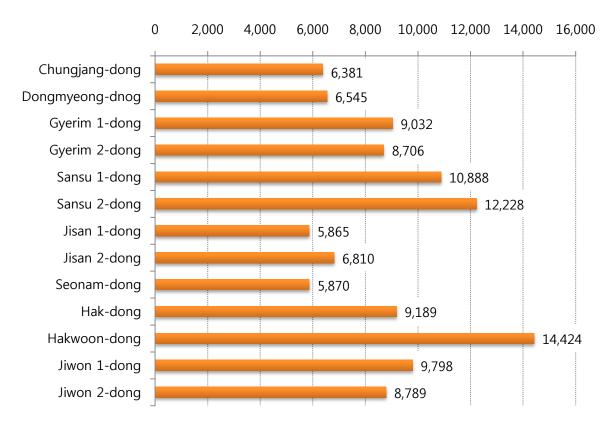


Chart 12. Population distribution per Dong district(Community Health and Medical Plan, Dong-gu, Phase 4)

Looking at population composition by age group[Table 7, Chart 13], population of 20s is the highest and followed by 40s and 30s.

Table 7. Population structure and trend by sex and age group (Community Health and Medical Plan, Dong-gu, Phase 4)

			200	)3					200	)4					20	05		
Age	tota	al	ma	le	fem	ale	tot	al	ma	le	fem	ale	tot	al	m	ale	femal	е
	Peo- ple	%																
0–4	4,605	3.95	2,452	4.24	2,153	3.67	4,505	3.83	2,392	4.10	2,113	3.56	3,907	3.41	2,074	3.64	1,833	3.18
5–9	6,406	5.50	3,384	5.86	3,022	5.15	6,236	5.30	3,289	5.64	2,947	4.96	5,937	5.18	3,164	5.56	2,773	4.82
10-14	6,863	5.89	3,580	6.20	3,283	5.58	7,148	6.07	3,773	6.47	3,375	5.68	6,912	6.04	3,588	6.30	3,324	5.77
15-19	8,063	6.92	4,072	7.05	3,991	6.80	7,728	6.56	3,886	6.66	3,842	6.47	7,125	6.22	3,598	6.32	3,527	6.14
20-29	24,047	20.64	12,488	21.61	11,559	19.70	23,905	20.30	12,304	21.10	11,601	19.53	22,659	19.79	11,715	20.58	10,899	18.92
30–39	16,467	14.14	8,674	15.01	7,793	13.28	16,981	14.42	8,980	15.40	8,001	13.47	16,644	14.53	8,978	15.77	7,666	13.31
40-49	17,535	15.05	8,395	14.53	9,140	15.57	17,790	15.12	8,573	14.70	9,217	15.51	17,101	14.93	8,292	14.56	8,809	15.30
50-59	14,535	12.48	6,814	11.78	7,721	13.15	14,848	12.61	6,946	11.91	7,902	13.30	15,206	13.27	7,106	12.48	8,100	14.07
60-65	6,526	5.61	3,164	5.48	3,362	5.73	6,533	5.55	3,120	5.35	3,413	5.74	6,428	5.62	3,075	5.40	3,353	5.82
0ver 65	11,439	9.82	4,760	8.24	6,679	11.37	12,059	10.24	5,061	8.67	6,998	11.78	12,606	11.01	5,347	9.39	7,304	12.68
Total	116,486	100.0	57,783	100.0	58,703	100.0	117,733	100.0	58,324	100.0	59,409	100.0	114,525	100.C	56,937	100.0	57,588	3100.0

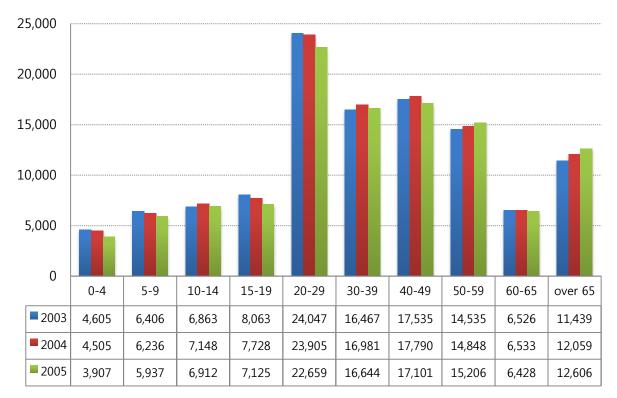


Chart 13. Population structure and trend by age group (Community Health and Medical Plan, Dong-gu, Phase 4)

### 2) Population trend

Birth rates of Dong-gu is decreasing every year(2005, 656 babies), and number of deaths is maintained a certain level(2005, 694 deaths). Marriage is 570 couples in 2005, and divorce is 282 couples.

Table 8. Population trend (Dong-gu Statistical Yearbook, 2006)

Year		Birth			Death		Marriage	Divorce	
i <del>c</del> ai	total	male	female	total	male	female	(couple)	(couple)	
2000	1,198	636	562	682	354	328	765	313	
2001	929	493	436	659	372	287	638	331	
2002	784	394	390	670	374	296	605	316	
2003	810	456	354	680	360	320	559	415	
2004	772	405	367	698	391	307	647	300	
2005	656	361	295	694	372	322	570	282	

### 3) Population movement

Looking at population movement situation for Dong-gu[Table 9], among recent 6 years, every year except 2004, as moving out population is higher than moving in population, net population is decreasing.

Table 9. Population movement situation (Dong-gu Statistical Yearbook, 2006)

		Total Mo	ovement		Net mo	vement	
Year	Movir	ng in	Movin	g out		Moving	
	people	Moving rate	People	Moving rate	People	rate	
2000	25,212	19.7	30,146	23.6	-4,934	-3.9	
2001	23,365	19.1	28,108	22.8	-4,743	-3.8	
2002	25,864	21.9	27,791	23.6	-1,927	-1.6	
2003	27,121	23.1	28,126	24.0	-1,005	-0.9	
2004	29,161	24.5	28,075	23.6	1,086	0.9	
2005	26,979	23.3	30,333	25.7	-3,354	-2.4	

# 4) Commuting going to school and weekly population

Resident population of Dong-gu in 2005 is 118,048 people, and as weekly population at 165,427 people, moving out population is more than moving in(work, school) population.

Table 10. Commuting going to school and weekly population (over 12 years old, Dong-gu Statistical Yearbook, 2006)

Year	Resident population	Non- commuting Non-going to School Pop	Commuting And going To School Population	Weekly Population	Weekly Population Index
1990	155,663	67,672	87,991	160,126	102.9
1995	124,085	50,368	73,717	127,712	102.9
2000	99,506	44,093	55,413	103,184	103.7
2005	118,048	61,677	56,371	165,427	140.1

<sup>\*</sup> Weekly population = Resident population +moving in population -moving out population

#### 5) Medically insured population

Population of medical Support receivers among population by types of medical insurance accounts for 7.4% (8.528 people), and this is higher than other 4 Gu districts.

Moreover, as the percentage of medically lacking population (single seniors, people with disabilities, basic living support receivers, children head of households) was also higher than other 4 Gu districts, we need to come up with plans to provide medical services for these group.

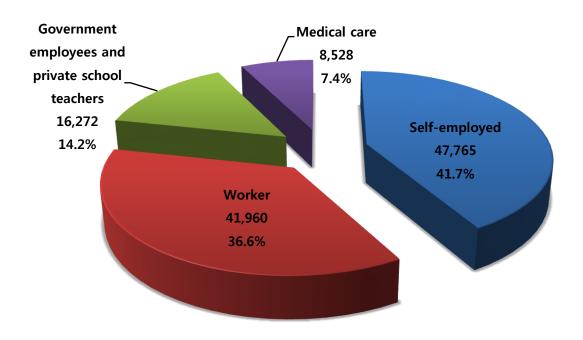


Chart 14. Population by types of medical insurance (Community Health and Medical Plan, Dong-gu, Phase 4)

Table 11. Comparison of medical supporting receiving population by districts of Gwangju metropolitan city(2005)

District	Population	Medical support (people, %)
Dong-gu	114,525	8,528(7.4)
Seo-gu	311,511	10,488(3.9)
Nam-gu	214,524	11,356(5.3)
Buk-gu	454,241	25,743(7.0)
Gwangsan-gu	309,829	11,672(3.8)

Table 12. Comparison of medically lacking population by districts of Gwangju metropolitan city (Community Health and Medical Plan, Dong-gu, Phase 4)

unit: people, household(%)

District	Single Senior	Number of registered people with disabilities	Basic Living support receivers	Children head of households
Dong-gu	2,693(2.4)	4,628(4.0)	5,300(4.6)	68 (0.1)
Seo-gu	394(0.1)	9,982(3.2)	10,488(3.4)	10 (0.01)
Nam-gu	3,420(1.5)	8,169(3.8)	7,650(3.5)	25(0.01)
Buk-gu	1,787(0.4)	15,244(3.3)	20,915(4.6)	89(0.01)
Gwangsan- gu	1,217(0.4)	10812(3.4)	11,672(3.7)	13(0.01)

# (8) Mt. Moodeung









The Mt. Moodeung like the mother's bosom is 1,187m above the sea and has gentle geographical features of the mountain. It has been also the religious object of Gwangju people.

It is proud of the magnificent curious rocks and the representative curious rocks are Kyubong, Ibsukdae peak and Seosukdae peak. Especially, Yukdang Choi Nam-Sun praised "Mt. Moodeung has the comparable beautiful scenery partially to the Mt. Kumkang of world-wide fame and Seosukdae peak is like a part of Haekumkang."

Also Moodeungsan Watermelon and Chunsul tea are the unique attractions of the Mt. Moodeung. We can top the mountain starting from Jungsimsa temple in two or three hours, it has travel road to the northeast of the mountain and it takes about 30 min. to Wonhyo valley from Gwangju station by car. So Gwangju people climb the Mt. Moodeung easily and it is the resting-place and mental pillar of Gwangju people.



Moodeungsan watermelon which is also called Purangi Subak is very big and delicious and it was the gift to king. It is harvested in the mid-August when the season of summer fruits is off, has the simple shape and vivid color unlike the watermelon sold in market and has sweet taste It weighs 7 ~8kg to 20kg and when it is time to harvest it, sacrificial rite is performed for the mountain god. Gwangju promotes the cultivation of the Moodeungsan Watermelon since 1976.

# (9) May 18 Democratic Uprising





Some political soldiers expanded emergency martial law to the whole country on May 17, 1980 to seize the political power illegally. The extension of 5.17 martial law was to deny the most people's desire for democratization which had been developed since 10.26. The new military authorities placed their martial law forces to each region and executed the military operation titled "Splendid Vacation" in Gwangju.

On May 18, 1980, there was the anti-martial law demonstration centering around college students in Gwangju where the passion for democratization was hot. This uprising was caused in the gate of Chonnam National University on May 18, 1980 (10 a.m). The students put out by the strong repression of martial force moved to downtown Kumnamro and extended their demonstration.

# (10) Chungjangro Festival of 7080







Chungjangro festival is held under the auspice of our "gu," and is supervised by the committee that runs Gwangju Chungjangro Festival. I is supported by the Ministry of Culture and Tourism, Gwangju city, Korea Tourism Corporation and media companies in Gwangju.

The major programs of the festival are held in three events like official events, exhibition events, performance and contest events, and secondary events. In the fist place, the official event that notifies the opening of festival is the parade on the street, ceremony and celebration performance on the eve of this festival.

The exhibition event showcases the lifestyles of people in the 1970s and 1980s, play events and the school life in our memory, 7080 memory hall letting middle and old people recollect the past, giving young people an opportunity to look at and learn from the old ways. Other features include the movie poster and culture of plays of the past, old postage stamp, art work, hometown companies; a flea market and a pet fashion show, etc.

The experiencing event adds more pleasure to the festivities by allowing people to directly experience the culture in the 1970s and 1980s, which includes features such as searching for tour attraction of the past, playgrounds of 7080, photo studio of the past, barbershop, alumni association of the past, DJ box, TV movie stroll, medicine peddler, experience of ceramic art, etc.

The performance and contest event includes such features as folk songs, Chungjang chick festival, Dongsan-gu art delegate's performance, children's puppet play, magic cocktail show, autonomous center contest, Chungjangro fashion performance, best 7080 person, youth dance contest, rock festival, pumba performance, children's drawing contest, etc, which express the bygone days interestingly by allowing young and middle-aged people to share the cultural activities. The secondary events included foods of the past, movies, old buses, riding a rail-less train, beautiful and sharing market, markets displaying things from abroad, Chungjangro goods auction.

# 2. HEALTH STATUS

# (1) Mortality

Although Dong-gu's Crude death rate shows tendency of steadily increasing, thinking that it's due to the aging of the population, when we compared it with the national data after adjusting for age factor, Dogn-gu's age-adjusted death rate showed tendency of decreasing and it showed lower death rate compared to national average[Chart 15, 16].

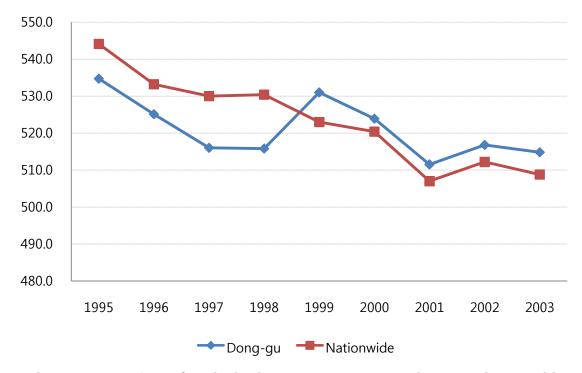


Chart 15. Comparison of crude death rate (per 100,000 people, Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

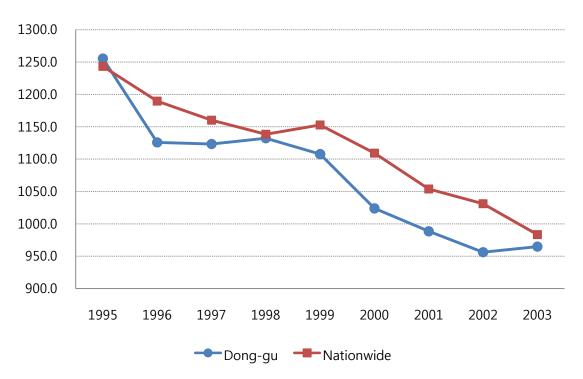


Chart 16. Comparison of age-adjusted death rate (per 100,000 people, Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

Looking at the death rate of 2003 for Dong-gu[Table 13], the death rate for cancer(144.2) was the highest followed by stroke(756.4), other injuries(67.8), heart disease(54.9), and diabetes(34.3).

Table 13. Number of death and death rate every year by major causes of death (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

		95	19	97	19	999	20	001	20	03
Year	Number of death	Death rate for 100,000								
Cancer	163	106.8	176	126.5	162	126.5	142	119.1	168	144.2
Lung cancer	24	15.7	24	17.2	25	19.5	29	24.3	28	24.0
Ovarian cancer		0.0	2	1.4	1	0.8	2	1.7	1	0.9
Stroke	94	61.6	81	58.2	79	61.7	89	74.7	89	76.4
Other injuries	120	78.6	84	60.4	84	65.6	69	57.9	79	67.8
Car accident	68	44.6	50	35.9	36	28.1	18	15.1	24	20.6
Murder	2	1.3	2	1.4		0.0	1	0.8	1	0.9
Suicide	8	5.2	9	6.5	13	10.2	7	5.9	15	12.9
Other heart diseases	77	50.5	47	33.8	54	42.2	58	48.7	64	54.9
Myocardial infarction	18	11.8	9	6.5	24	18.7	28	23.5	25	21.5
Liver disease	39	25.6	28	20.1	33	25.8	28	23.5	15	12.9
Diabetes	40	26.2	49	35.2	29	22.6	34	28.5	40	34.3
Asthma	9	5.9	7	5.0	2	1.6	12	10.1	17	14.6
Pneumonia	3	2.0	3	2.2	7	5.5	5	4.2	3	2.6
Tuberculosis	13	8.5	6	4.3	6	4.7	4	3.4	7	6.0
Cold		0.0		0.0	1	0.8		0.0		0.0
Total	678	444.3	577	414.7	556	434.2	526	441.3	576	494.5
Total deaths(%)	847	(80.1)	757	(76.2)	717	(77.5)	671	(78.4)	687	(83.8)

If you compare Dong-gu's death rate based on the result of analysis for Dong-gu's death rates (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010) to the national data, there was no disease that had higher death rate and was increasing recently.

Causes that had lower rates than the national average but was recently increase were myocardial infarction, stroke, Diabetes, lung cancer, suicide, Asthma, heart diseases and tuberculosis.

Causes that had higher rates compare to the national average but were decreasing were murder, and lower than the national average and decreasing causes were pneumonia, car accident, cancer, all the injuries, liver disease, and cold.

# (2) Morbidity

#### 1) Usage of medical services

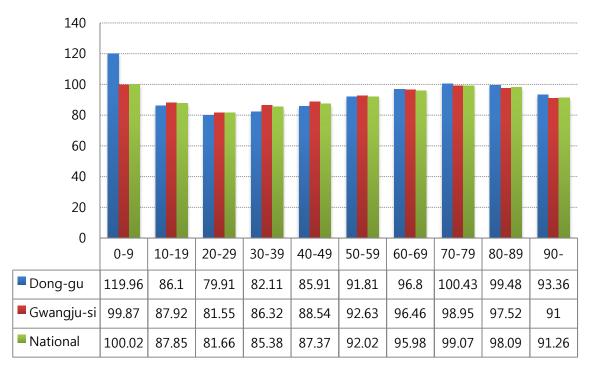


Chart 17. Medical service using rate by age, 2005(%, Community Health and Medical Plan, Dong-gu, Phase 4)

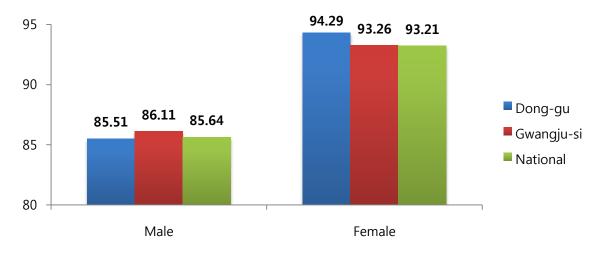


Chart 18. Medical service using rate by sex, 2005(%, Community Health and Medical Plan, Dong-gu, Phase 4)

Table 14. Top 10 disease composite rates (Community Health and Medical Plan, Dong-gu, Phase 4)

		<u>,                                      </u>					2005		
Rank		2003			2004			2005	
Rum	Dong-gu	Gwangju-si	National	Dong-gu	Gwangju-si	National	Dong-gu	Gwangju-si	National
1	Problems related to Teeth and supporting structures	Other Acute Upper Respiratory Infections	Other Acute Upper Respiratory Infections	Problems related to Teeth and supporting structures	Problems related to Teeth and supporting structures	Acute pharyngitis and acute tonsilitis	Problems related to Teeth and supporting structures	Acute pharyngitis and acute tonsilitis	Acute pharyngitis and acute tonsilitis
	27,532 people	355,054 people	12,363,850 people	29,554 people	355,981 people	12,293,538 people	29,501 people	366,090 people	12,638,726 people
2	Other Acute Upper Respiratory Infections	Acute pharyngitis and acute tonsilitis	Acute pharyngitis and acute tonsilitis	Other disorders of skin and subcutaneous tissue	Acute pharyngitis and acute tonsilitis	Other acute upper repiratory infection	Other disorders of skin and subcutaneous tissue	Other Acute Upper Respiratory Infections	Other Acute Upper Respiratory Infections
	21,777 people	341,917 people	11,762,585 people	21,736 people	351,181 people	12,129,254 people	23,395 people	364,838 people	12,229,289 people
3	Other disorders of skin and subcutaneous tissue	Problems related to Teeth and supporting structures	Problems related to Teeth and supporting structures	Other Acute Upper Respiratory Infections	Other Acute Upper Respiratory Infections	Problems related to Teeth and supporting structures	Other Acute Upper Respiratory Infections	Problems related to Teeth and supporting structures	Problems related to Teeth and supporting structures
	20,671 people	338,127 people	11,010,985 people	21,181 people	350,083 people	11,443,394 people	21,138 people	358,421 people	11,788,868 people
4	Acute pharyngitis and acute tonsilitis	Other disorders of skin and subcutaneous tissue	Other disorders of skin and subcutaneous tissue	Acute pharyngitis and acute tonsilitis	Other disorders of skin and subcutaneous tissue	Other disorders of skin and subcutaneous tissue	Acute pharyngitis and acute tonsilitis	Other disorders of skin and subcutaneous tissue	Other disorders of skin and subcutaneous tissue
	19,830 people  Acute bronchitis	266,805 people  Acute bronchitis	8,606,323 people  Acute bronchitis	19,907 people  Acute bronchitis	279,078 people Acute bronchitis	9,057,850 people Acute bronchitis	20,974 people  Acute bronchitis	298,213 people  Acute bronchitis	9,638,447 people  Acute bronchitis
5	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis	and acute bronchiolitis
	17,458 people	241,888 people	8,304,381 people	18,010 people	240,199 people	8,649,404 people	19,268 people	259,635 people	9,365,592 people
6	Dental caries	Dental caries 205,753 people	Disorders of Musculoskeletal and connective tissues	Disorders of Musculoskeletal and connective tissues	Dental caries 204,942 people	Disorders of Musculoskeletal and connective tissues	Disorders of Musculoskeletal and connective tissues	Dental caries	Disorders of Musculoskeletal and connective tissues
	14,555 people	203,733 people	7,434,029 people	15,682 people	201,912 people	7,829,440 people	16,257 people	157,075 people	8,200,464 people
7	Disorders of Musculoskeletal and connective tissues	Disorders of Musculoskeletal and connective tissues	Dental caries 5,536,956 people	Dental caries 14,309 people	Disorders of Musculoskeletal and connective tissues	Dislocation of multiple body regions and others(1276)	Dental caries 14,662 people	Disorders of Musculoskeletal and connective tissues	Dislocation of multiple body regions and others(1276)
	14,231 people	174,979 people	o,ooo,ooo peopie	1 1,505 people	187,660 people	5,415,651 people	1 1,002 people	195,359 people	5,800,802 people
8	Dislocation of multiple body regions and sprains	Other disorders of nose and nasal sinuses	Dislocation of multiple body regions and others(1276)	Dislocation of multiple body regions and others(1276)	Other disorders of nose and nasal sinuses	Dental caries	Dislocation of multiple body regions and others(1276)	Dislocation of multiple body regions and others(1276)	Other disorders of nose and nasal sinuses
	10,270 people	136,147 people	5,054,632 people	11,126 people	150,031 people	5,400,895 people	12,684 people	160,651 people	5,430,902 people
9	Conjunctivitis and other disorders of conjunctiva	Dislocation of multiple body regions and others(1276)	Other disorders of nose and nasal sinuses	Other disorders of nose and nasal sinuses	Dislocation of multiple body regions and others(1276)	Other disorders of nose and nasal sinuses	Other disorders of nose and nasal sinuses	Other disorders of nose and nasal sinuses	Dental caries
	8,947 people	128,253 people	4,828,957 people	10,880 people	144,099 people	5,124,621 people	10,967 people	151,510 people	5,312,368 people
10	Other dorsopathies	Conjunctivitis and other disorders of conjunctiva	Other dorsopathies	Other dorsopathies	Conjunctivitis and other disorders of conjunctiva	Other dorsopathies	Other dorsopathies	Conjunctivitis and other disorders of conjunctiva	Soft tissue disorders
	7,830 people	117,310 people	3,883,144 people	9,654 people	118,408 people	4,126,475 people	10,211 people	114,923 people	4,454,344 people

When you compare morbidity rates for major disease of doing-gu to Gwanju metropolitan city and the national average, morbidity rates for cancer(Stomach, liver, lung, intestine, ovary), hypertension, diabetes, arthritis, mental disease, liver disease were higher than Gwangju and the national average.

Table 15. Morbidity rates for major diseases(treatment)

Classi-		2003			2004			2005	
fication	Dnog-gu	Gwanju-si	National	Dnog-gu	Gwanju−si	National	Dnog-gu	Gwanju-si	National
Stomach cancer	1.83	1.44	1.84	1.78	1.46	1.84	2.15	1.56	1.97
Liver cancer	1.27	0.91	1.04	1.19	0.85	0.96	0.95	0.85	0.96
Lung cancer	1.32	0.94	1.04	1.36	0.90	0.95	1.22	0.86	0.94
Intestine cancer	1.52	1.00	1.23	1.57	1.03	1.26	1.85	1.16	1.36
Breast Cancer	0.97	0.87	1.06	1.00	0.94	1.14	1.19	1.02	1.26
Ovarian cancer	0.61	0.42	0.56	0.71	0.46	0.53	0.91	0.51	0.55
Hypertension	75.49	54.71	67.58	81.57	59.28	73.55	90.49	64.96	80.75
Diabetes	36.79	26.81	30.40	39.30	27.95	31.93	45.14	30.50	35.24
Teeth disease	236.07	241.36	226.51	250.68	252.45	233.73	256.91	253.66	239.42
Arthritis	83.34	69.32	79.75	89.62	73.02	84.51	98.55	79.02	90.18
Mental disease	40.36	29.19	30.96	43.03	30.41	32.46	46.65	32.56	34.85
Infectious disease	171.40	180.51	159.46	176.95	190.09	165.20	189.41	200.78	169.01
Liver disease	32.40	27.67	23.92	30.52	27.51	24.13	30.18	28.07	25.42

#### 2) Hypertension

Because hypertension does not have special symptoms and often progresses steadily, in many cases, you don't know that you have hypertension. However, hypertension is as a major danger factor for circulatory diseases, it could cause stroke, heart disease, and nephritis, thus it is very important in health studies, and it accounts for 30~60% of causes for circulatory diseases.

We define hypertension as when you intake Antihypertensive Drugs or where systolic blood pressure is over 140mmHg, or mussel opening blood pressure of 90 mmHg to calculate morbidity rate. And we estimated number of patients by using the morbidity rate. And the estimate for hypertension patients for men is 12,884 people and 13,466 people for woman and total 23.163 people.

Dong-gu's morbidity rates is the highest with 103 people(per 100,000)[Table 17], if you use the data from national health insurance management group per districts of Gwnagju Metropolitan city.

Table 16. Estimated number of patients of hypertension for dong-gu, Gwangju metropolitan city (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	М	ale	Fer	male	To	otal
Age	Morbidity rate	Number of patients	Morbidity rate	Number of patients	Morbidity rate	Number of patients
10-14	1.44	54	1.04	35	1.25	89
15–19	3.93	153	0.82	32	2.41	186
20-24	10.49	667	1.76	112	5.42	689
25-29	11.06	657	1.58	83	5.51	617
30-34	16.1	799	2.84	120	7.99	734
35–39	18.81	756	8.01	302	12.57	1,058
40-44	24.44	1,017	11.89	526	16.74	1,437
45-49	33.35	1,471	19.9	954	25.79	2,375
50-54	40.16	1,420	32.73	1,308	35.51	2,675
55-59	39.79	1,356	33.85	1,323	36.69	2,684
60-64	55.81	1,741	54.37	1,856	55.02	3,594
65-69	58.17	1,359	61.47	1,560	60	2,924
70-74	55.83	756	59.28	1,080	57.93	1,840
Over 75	49.33	676	63.43	1,454	58.34	2,338
Total	24.47	12,884	22.67	13,466	21.65	23,163

Table 17. Hypertension morbidity rate for population over 40 years old by districts of Gwangju (Community Health and Medical Plan, Dong-gu, Phase 4)

District	Tested	Occurred	Morbidity rate per 100,000 people
Dong-gu	14,329	147	103
Seo-gu	44,004	373	85
Nam-gu	29,237	275	94
Buk-gu	59,537	485	81
Gwangsna-gu	41,757	375	90

#### 3) Diabetes

Based on cases where someone is over blood sugar rate of 126mg/dl or taking diabetes treatment medicine, estimates for patients with diabetes were 3,345 people for men and 3,550 for women, and 6.848 for the total.

Dong-gu's residents showed the highest morbidity rate with 137 people(per 100,000) when we analyzed based on the date from the national health insurance group.

Table 18. Estimated number of patients of diabetes for dong-gu, Gwangju metropolitan city (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	Ma	ale	Female		Total	
Age	Morbidity rate	Number of patients	Morbidity rate	Number of patients	Morbidity rate	Number of patients
10-14	2.9	109	1.03	35	2.01	144
15-19	1.49	58	2.2	85	1.84	142
20-24	1.97	125	1.44	91	1.67	212
25-29	1.88	112	1.17	62	1.47	165
30-34	3.4	169	3.14	133	3.24	298
35-39	6.79	273	5.16	195	5.84	455
40-44	8.43	351	2.43	107	4.73	406
45-49	9.14	403	5.55	266	7.1	654
50-54	9.29	329	7.67	306	8.28	624
55-59	9.19	313	13.68	534	11.55	845
60-64	12.24	382	14.11	482	13.26	866
65-69	17.27	403	22.05	560	19.88	969
70-74	12.41	168	16.19	295	14.79	470
Over 75	10.95	150	17.45	400	14.95	599
Total	6.35	3,345	5.98	3,550	6.4	6,848

Table 19. Diabetes morbidity rate for population over 40 years old by districts of Gwangju (Community Health and Medical Plan, Dong-gu, Phase 4)

District	Tested	Occurred	Morbidity rate per 100,000 people
Dong-gu	14,329	196	137
Seo-gu	44,004	408	93
Nam-gu	29,237	383	131
Buk-gu	59,537	566	95
Gwangsan-gu	41,757	333	80

<sup>\*</sup> Data source: 2004 National health insurance group, analysis of Health check results

#### 4) Hyperlipidemia

We estimated problem groups including high cholesterol. The standard for problems defines as when total cholesterol level is over 240 ml/dl and HDL cholesterol level is below 40 ml/dl and neutral fat is below 200 mg/dl and LDL cholesterol is over 160 ml/dl.

Estimated number of patients with hyperlipidemia are 4,070 for men, 4,948 for women, 8.983 for the total. Dong-gu's residents morbidity rate is 2<sup>nd</sup> highest after Gwangsan-gu when analyzing the data from the national health insurance group.

Table 20. Estimated number of patients of hyperlipidemia for dong-gu, Gwangju metropolitan city (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	Ma	ale	Female		Total	
Age	Morbidity rate	Number of patients	Morbidity rate	Number of patients	Morbidity rate	Number of patients
10-14	7.39	279	10.43	352	8.84	632
15-19	7.19	279	11.44	440	9.26	716
20-24	6.05	385	1.26	80	3.36	427
25-29	5.17	307	5.43	285	5.32	596
30-34	4.87	242	4.97	210	4.93	453
35-39	8.06	324	3.44	130	5.38	419
40-44	12.85	535	4.1	181	7.52	645
45-49	8.53	376	6.9	331	7.61	701
50-54	8.39	297	12.82	512	11.15	840
55-59	10.72	365	15.6	609	13.27	971
60-64	11.58	361	23.47	801	18.02	1,177
65-69	5.3	124	19.83	503	13.32	649
70-74	5.25	71	15.21	277	11.46	364
Over 75	9.09	125	10.29	236	9.82	394
Total	7.73	4,070	8.33	4,948	8.4	8,983

Table 21. Hyperlipidemia morbidity rate for population over 40 years old by districts of Gwangju (Community Health and Medical Plan, Dong-gu, Phase 4)

District	Tested	Occurred	Morbidity rate per 100,000 people
Dong-gu	14,329	91	62
Seo-gu	44,004	233	52
Nam-gu	29,237	167	55
Buk-gu	59,537	372	62
Gwangsan-gu	41,757	296	74

#### 5) Obesity

It is necessary to pay more attention to prevention of obesity rather than treatments for Korea which ranks in the middle of the pack among the 14 regions of the World considering warnings from WHO that obesity will be as important as smoking in its influence to health the 21 century.

The standard of distinguishing between overweight and obesity is Body Mass Index(BMI), and BMI has strong relationship with Body Fat Amount, and WHO defines overweight as someone who is over BMI 25.0 kg/m<sup>2</sup> and obesity as someone is over BMI 30.0 kg/m<sup>2</sup>.

However, although these standards are appropriate for Westerners, these are inappropriate for Asian regions, thus we define obesity as over BMI 25.0 kg/m $^2$ (KNHANES III, 2005).

From residents over 20 years of age, when we calculated for estimated residents by defining obesity as someone with over BMI 25 kg/m<sup>2</sup>, it was 27,086 people(male 15,106 and female 13.424 people)

Table 22. Estimated number of patients of obesity for dong-gu, Gwangju metropolitan city (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	Male		Female		Total	
Age	Morbidity rate	Number of patients	Morbidity rate	Number of patients	Morbidity rate	Number of patients
20-24	24.5	952	9.97	632	16.23	2,062
25-29	30.09	1,914	13.84	728	20.54	2,300
30-34	33.26	1,976	18.26	771	24.14	2,218
35-39	36.46	1,809	20.43	771	27.2	2,120
40-44	41.11	1,652	29.17	1,290	33.87	2,907
45-49	36.5	1,519	39.55	1,897	38.22	3,519
50-54	32.24	1,422	40.03	1,599	37.08	2,793
55-59	32.5	1,150	41.3	1,614	37.05	2,711
60-64	29.95	1,021	50.7	1,730	41.34	2,701
65-69	25.22	787	41.38	1,050	34.37	1,675
70-74	27.74	648	45.95	837	39.21	1,246
Over 75	18.86	256	21.99	504	20.82	834
Total	28.7	15,106	22.6	13,424	25.32	27,086

#### 6) Hepatitis B

Estimates of Patients for Hepatitis B Antigen Positive for Dong-gu, Gwangju Metropolitan City are 2469 people for male, 2,465 people for female and 4,686 people for total.

Table 23. Estimated number of patients of hepatitis B for dong-gu, Gwangju metropolitan city (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	Male		Female		Total	
Age	Morbidity rate	Number of patients	Morbidity rate	Number of patients	Morbidity rate	Number of patients
10-14	1.93	73	0.89	30	1.44	103
15-19	3.33	129	1.54	59	2.46	190
20-24	6.97	443	3.98	252	5.28	671
25-29	4.65	276	4.67	246	4.66	522
30-34	5.43	269	3.99	169	4.55	418
35-39	6.61	266	5.29	200	5.84	455
40-44	5.53	230	5.31	235	5.39	463
45-49	6.67	294	8.89	426	7.91	728
50-54	5.67	201	4.48	179	4.93	371
55-59	4.9	167	5.06	198	4.98	364
60-64	4.4	137	2.98	102	3.63	237
65-69	2.02	47	0.83	21	1.36	66
70-74	4.16	56	5.13	93	4.77	152
Over 75	2.11	29	1.49	34	1.73	69
Total	4.69	2469	4.15	2465	4.38	4686

# 3. LIFESTYLES

## (1) Smoking

According to 2002 Kwangju Metropolitan City Health Consciousness and Behavior Research, although the smoking rate for Dong-gu was lower than the national average, it was the highest among the 5 Gu districts.

The Smoking for male adults in Dong-gu was at 51.1%(national average at 61.8%) and the smoking rate of female adults was at 1.8%(national average at 5.35%).

Table 24. Smoking situation for Gwangju metropolitan city and Dong-gu (2002 Kwangju Metropolitan City Health Consciousness and Behavior Research)

Unit: people(%)

	Smoking	Quit	No smoking	total
Dong-gu	102(24.6)	20(4.8)	293(70.6)	415(100.0)
Gwansan-gu	194(23.3)	67(8.1)	570(68.6)	831(100.0)
Nam-gu	133(18.6)	34(4.8)	548(76.6)	715(100.0)
Buk-gu	289(19.2)	97(6.4)	1,121(74.4)	1,507(100.0)
Seo-gu	194(21.6)	59(6.6)	646(71.9)	899(100.0)
Gwangu(average)	866(19.8)	277(6.3)	3,178(72.8)	4,367(100.0)
National(average)	2,408(30.4)	701(8.9)	4,812(60.8)	7,921(100.0)

Table 25. Dong-gu's smoking rate by sex and age group (2002 Kwangju Metropolitan City Health Consciousness and Behavior Research)

	Smoking	Quit	No smoking	total
Dong-gu (male)	96(51.1)	19(10.1)	73( 38.8)	188(100)
-29	16(39.0)	1(2.4)	24( 58.5)	41(100)
30-39	33(67.3)	3(6.1)	13( 26.5)	49(100)
40-49	29(60.4)	6(12.5)	13( 27.1)	48(100)
50-59	17(37.0)	8(17.4)	21( 45.7)	46(100)
60-	1(25.0)	1(25.0)	2( 50.0)	4(100)
National (male)	(61.8)	(17.9)	(20.3)	3606(100)
-29	437(67.8)	43(6.7)	164(25.5)	644(100)
30-39	640(67.9)	126(13.4)	177(18.7)	943(100)
40-49	607(66.7)	146(16.1)	157(17.2)	910(100)
50-59	290(55.6)	116(22.2)	116(22.3)	522(100)
60-	260(44.3)	209(35.6)	118(20.1)	587(100)
Dong-gu (female)	4( 1.8)	1( 0.4)	218( 97.8)	223(100.0)
-29	_	_	36(100.0)	36(100.0)
30-39	2( 4.5)	_	42( 95.5)	44(100.0)
40-49	_	_	56(100.0)	56(100.0)
50-59	1(1.4)	1(1.4)	69( 97.2)	71(100.0)
60-	-	-	14(100.0)	14(100.0)
National (female)	(5.35)	(1.61)	(93.03)	4315(100.0)
-29	39(4.64)	25(2.95)	771(92.41)	834(100.0)
30-39	38(3.57)	11(1.05)	1004(95.38)	1053(100.0)
40-49	35(3.68)	4(0.43)	922(95.89)	961(100.0)
50-59	24(4.00)	6(1.01)	565(95.00)	595(100.0)
60-	98(11.24)	25(2.87)	749(85.89)	872(100.0)

# (2) Alcohol Drinking

We cannot know accurately about Dong-gu's drinking rate because surveys are not administered, but we can estimate it indirectly through 2002 Kwangju Metropolitan City Health Consciousness and Behavior Research.

Drinking rate for adults males in Gwangju is at 66.5% and is similar to the national average for men(68.8%). In Dong-gu's case, if you assume it's about the same level, number of male drinkers over 20 years old is estimated as 29,890 people.

Additionally the drinking rate for adult females is at 28.9% and is similar to the national average(27.8%). If we assume Dong-gu has about the same level, number of female drinkers over 20 years old is estimated at 13,743 people. If we define "high risk drinker" as someone who drinks more than 5 glasses more than 3 times a week, number of high risk drinkers in Dong-gu is estimated at 22,994 people.

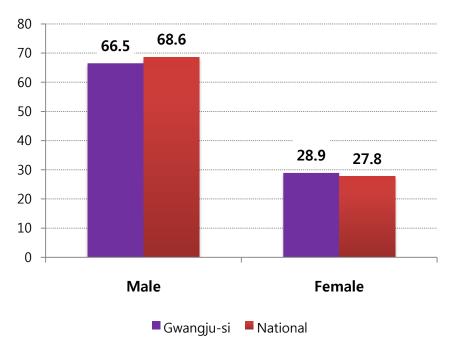


Chart 19. Comparison of adult drinking rate (%, 2002 Kwangju Metropolitan City Health Consciousness and Behavior Research)

# (3) Physical Activity

As with drinking rate, although exact figures are not available because surveys on Dong-gu's physical exercise are not administered, it's possible to estimate through 2002 Kwangju Metropolitan City Health Consciousness and Behavior Research.

Physical exercise rate for Gwangju's Male adults was at 37.1%, and was higher than national average for men(31.7%) and exercise rate for female adults was at 32.1% and was also higher than the national average(24.2%). If we assume donggu's physical exercise rate to be similar to Gwangju's case, people who are not exercising physically can be estimated as male 27,617, female 32,629 people.

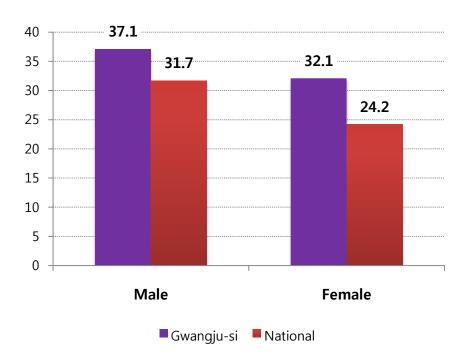


Chart 20. Physical exercise rate (%, 2002 Kwangju Metropolitan City Health Consciousness and Behavior Research)

## (4) Dental health

Table 26. Dental health related index by year (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

DN	ME Index		ermanent tooth ate (%)	Teeth surface scaling rate(%)	
Survey year	number	Survey year	number	Survey year	number
2002	5.74	2002	77.39	2002	26.04
2003	5.19	2003	70.15	2003	29.54
2004	5.37	2004	66.34	2004	37.64
2005	5.42	2005	42.55	2005	_

W Until 2002~4, School continuous dental health management Dental health conditions (based on Seoseok elementary school 6<sup>th</sup> graders(12 years old) in the jurisdiction)

X 2005 is based on Sansu elementary school 6 graders(12 years old) in the jurisdiction

X DMF Index: number of Permanent teeth experiencing cavity

Table 27. Comparison of indexes of dental health conditions (Community Health and Medical Plan, phase 4)

	tegories	Index name	National average	Major city level	Dong- gu level	2010 dong- gu target	2010 National target	Data source
		Young teeth cavity experience rate for 5 year old(df rate)	77.7	76.25	82.69%	79	67.0	
	Young teeth	Experinece of cavity for young teeth for 5 year olds (dft index)	4.12	4.03	5.94	5.82	4.4	17 kindergartens in the jurisdiction (849childeren)
		Cavity experience young teeth rate for 5 year olds(dft rate)	49.9 (2003)	_	30.85%	27	51.0	Overview of dental health condition
		Cavity young teeth rate for 5 year olds(df rate)	36.89	36	61.98%	58	30	-2006 data-
		Cavity rate for 5 year old(ft rate)	-	-	38.26%	42%	64%	
Teeth		Permanent teeth Cavity Experience population rate for 12 year olds(DMF rate)		78.15	91.15%	89	62.0	
		Cavity experienced permanent teeth index for 12 year olds (DMFT index)	3.25	3.41	4.77	4.65		6 graders of 3 elementary schools in
	Permanent teeth	12 years old Cavity Experience Permanent Tooth rate(Morbidity rate) (DMFT rate)	49.8 (2003)	_	19.19%	17.0	34.0	the jurisdiction(407 children) Overview of dental health condition
		Rate of cavity for permanent teeth for 12 year old(DMFT rate)	45.97	46.55	48.35%	45.0	10	research -2006 data-
		Cavity rate of 12 years old (FT rate)	53.8 (2003)	_	51.50%	54.0	83.0	
Teeth	structure	Rate of population who need teeth surface scaling for 15~19 years old	37.17	31.11	38%	36	33.0	Citizen dental health condition survey data, 2003

							Current	conditio	ns of
							Health	check(	dental
	Rate of population who	74.00	72.22	68.25%	66 70.0		health)	results f	for 63
	need teeth surface scaling	74.60				70.0	people	in	the
	for 35~44 years old					jurisdict	ion , 200	6	
	65~74 years old rate of	46.9	_	43.75%	46	50.0			
	having more than 20 teeth	(2000)		40.75%	40	30.0	current conditi	conditio	ons of
	65~74 years old natural	12.1		16.34 개	10.40	10.0	results center		Senior senior
Senior Dental health	teeth number	(2003)	_	10.34 /1	16.46	16.3	dental	check	(96
Hounn	Rate of pain of	01.1					people) jurisdict		the
	mastication complain for	31.1	_	15.53%	15.53	28.0	'05 ~ '0	06 data	
	people over 65 years old	(2004)							

# 4. PHYSICAL ENVIRONMENT

## (1) Air Quality

Looking at the average level of a few selected air pollution material such as sulfurous acid gas, nitrogen dioxide, ozone, carbon monoxide and dust particles, while pollution level for sulfurous acid gas and dust particles are decreasing due to the air pollution lowering policies including increase in use of liquid fuel of low sulfur or gas fuel away from solid fuel or liquid fuel, ozone pollution rate is continuing to increase due to increase in discharge from cars, thus air pollution trend is moving to developed nation style pollution from developing nation style.

Table 28. Level of air pollution (Gwangju Health & Environment Research Institute)

Year	SO₂ (ppm)	NO₂ (ppm)	O₃ (ppm)	CO (ppm)	PM10 (#g/m²)	
2000	0.005	0.031	0.016	0.7	43	
2001	0.004	0.027	0.016	0.7	40	
2002	0.005	0.027	0.014	0.6	43	
2003	0.004	0.019	0.020	0.5	32	
2004	0.005	0.015	0.020	0.6	35	
2005	0.005	0.019	0.020	0.6	39	
2006	0.004	0.025	0.018	0.8	59	
Standard (mean)	0.02(year)	0.03(year)	0.06(8hours)	9(8hours)	50(year)	

## (2) Water Quality

Water quality Standard has been set in order to protect health of citizens and build pleasant environments in Korea.

Water quality standards are with 8 categories related to living environments such as pH, BOD, COD, SS, DO, total number of colon bacillus, and total amount and 9 categories related to human health such as Cd, AS, CN, Hg, organophosphorus, Pb, Cr+6 and ABS, and these standards are applied to river, lake and oceanic water.

And water quality of rivers and lakes can be divided into 5 levels. In dong-gu's case, because main river water is polluted, it is classified as III level.

Table 29. Level of water quality in Yeongsan river water supply source water (Gwangju Health & Environment Research Institute)

Year	Нq	DO (mg/ <i>l</i> )	BOD (mg/l)	COD (mg/l)	SS (mg/l)	T−N (mg/ℓ)	T−P (mg/ℓ)
2003	6.7	7.2	3.5	5.7	4.9	4.810	0.394
2004	6.8	6.8	4.9	6.1	6.6	3.810	0.184
2005	7.0	6.6	4.6	6.0	12.3	4.026	0.312
2006	7.0	5.8	3.9	5.8	13.2	3.450	0.137

## (3) Water & Sewerage Services

#### 1) Public Water Services

Dong-gu's water usage for 2005 is 12,024,607 m³ (daily average of 32,944 m³), and The average amount of water supplied per person per day is 287 liters and it's lower than the national average of 363 liters, and the water supply distribution rate is at 99.6% and is higher than the national average of 90.7% [Table 30, Chart 21].

Table 30. Public water services (Dong-gu Statistical Yearbook, 2006)

Year	Population	Water-supply population	Water-supply rate(%)	
2000	124,089	123,470	99.5	
2001	119,556	118,842	99.4	
2002	117,696	117,306	99.7	
2003	117,059	116,356	99.4	
2004	118,432	117,975	99.6	
2005	115,220	114,813	99.6	

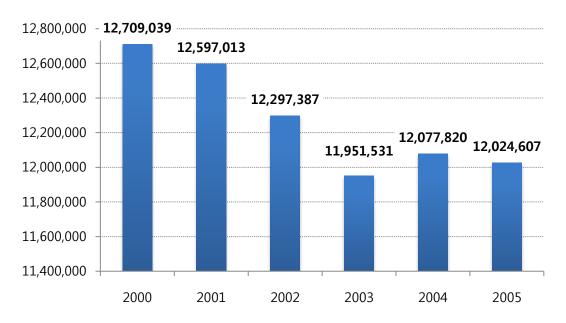


Chart 21. Waterworks supplied water usage amount per year (Dong-gu statistical yearbook, 2006)

## 2) Sewerage services

Sewage system as one of the must-have city base facilities for healthy modern city is an important facility in protecting rivers by removing rain water and sewage water. For Dong-gu, Gwangju, Sewage system distribution rate is at 98.5% as of 2005.

Table 31. Sewage Population and Distribution (Dong-gu Statistical Yearbook, 2006)

Year	Population	Sewage-supply population	Sewage-supply rate(%)		
2000	124,089	122,103	98.4		
2001	119,556	117,570	98.3		
2002	117,696	115,692	98.3		
2003	117,059	115,535	98.7		
2004	118,432	116,613	98.5		
2005	115,220	113,461	98.5		

# (4) Waste Collection and Disposal

Dong-gu's amount of discharged waste materials is maintained at 200 tons per day every year, and it collected all the discharged amount, and from 2005 the recycling rate(55.5%) is higher than the burying rate(44.2%) or the burning rate(0.3%)

Table 32. Waste collection and disposal (Dong-gu Statistical Yearbook, 2006)

Unit: ton/day, (%)

V	Amounts of	Amounts of	Disposal	By type of waste disposal(ton/day)						
Year	discharged waste	waste disposal	ratio(%)	Landfill (A)	Incineration (B)	Recycling (C)	Total (A+B+C)			
2000	196.7	196.7	100.0	100.3(51.0)	17.8(9.1)	78.5(39.9)	196.7			
2001	205.6	205.6	100.0	101.6(49.4)	25.2(12.3)	78.8(38.3)	205.6			
2002	198.0	198.0	100.0	120.8(61.0)	6.3(3.2)	70.9(35.8)	198.0			
2003	190.4	190.4	100.0	118.6(62.3)	2.7(1.4)	69.1(36.3)	190.4			
2004	196.3	196.3	100.0	124.2(63.3)	2.1(1.1)	70.0(35.7)	196.3			
2005	196.2	196.2	100.0	86.7(44.2)	0.6(0.3)	108.9(55.5)	196.2			

## (5) Noise

Noise in home has become one of the problems with population increase, urbanization and increase in number of vehicles. Noise in home can be from various sources of citizens' daily lives, and especially impacts sensibilities of citizens unlike other types of pollutions.

In the case of "ga" area of Dong-gu, it has exceeded the environmental standard for both general area and near-by roads and both day and night.

Table 33. Level of noise (Gwangju Health & Environment Research Institute)

Unit: Leq dB(A)

Voor	General area	a("ga"area)	Near by Road("ga" area)			
Year	Day Night		Day	Night		
2000	54	46	72	63		
2001	46	45	57	61		
2002	52	47	64	54		
2003	51	47	67	60		
2004	52	47	68	61		
2005	53	46	68	62		
Standard	50	40	65	55		

<sup>&</sup>quot;ga" Area: Green, Residential, natural environmental preservation area and 50 m around schools, hospitals

# 5. PHYSICAL & SOCIAL INFRASTRUCTURE

# (1) Housing

Dong-gu's housing distribution rate is 84.3%. The majority are single-family houses accounting for 67.8% followed by apartments at 25.4%, multi-family housing(5.1%) and communal housing(1.7%).

Table 34. Type of housing units (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	No. of		Housing	No. of houses by type of housing unit					
Year	househ olds	Total	supply rate (%)	Detached dwelling	Apartment	Row- house	Apartment unit in a private house		
1998	43,782	35,155	80.3	27,528	6,925	605	97		
1999	42,740	35,425	82.9	27,463	7,257	605	97		
2000	42,237	35,382	83.7	27,331	7,257	613	113		
2001	41,911	36,757	87.7	27,164	8,031	613	782		
2002	42,427	37,147	87.5	27,226	8,050	613	1,238		
2003	44,081	37,717	85.5	26,982	8,519	613	1,603		
2004	45,705	37,884	82.9	26,438	8,593	679	1,759		
2005	46,386	39,091	84.3	26,499	9,933	679	1,980		

## (2) Parks

Parks and green areas provide sentimental pleasantness and pleasant living environment and comfortable rest areas. Although there are 11 parks in Dong-gu as of 2005 up from 8 in 2000, and Parks and green areas(excluding 1 State Park) per person is below the minimum standard(6m²)according to the City Park Law at only 2.19m² per person.

Table 35. Parks (Dong-gu Statistical Yearbook, 2006)

Unit: 1,000 m², number

Vaar	Natural Parks				Urban Parks		Total	
Year	National	Provincial Total(A)		Children's	Neighbor- hood	Total(B)	(A+B)	
2000	I	7,850(1)	7,850(1)	12(5)	182(3)	194(8)	8,044(8)	
2001	I	7,850(1)	7,850(1)	12(5)	182(3)	194(8)	8,044(8)	
2002	I	7,850(1)	7,850(1)	12(5)	229(4)	241(11)	8,091(11)	
2003	I	7,850(1)	7,850(1)	12(7)	232(5)	244(12)	8,094(12)	
2004	_	7,850(1)	7,850(1)	15(7)	234(5)	249(12)	8,099(12)	
2005	_	7,850(1)	7,850(1)	18(8)	234(3)	252(11)	8,102(11)	

# (3) Motor Vehicles

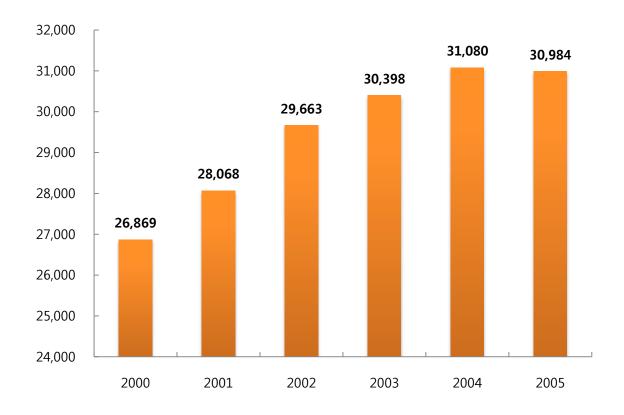


Chart 22. Motor vehicles registration (Dong-gu Statistical Yearbook, 2006)

Table 36. Motor vehicles registration in 2005 (Dong-gu Statistical Yearbook, 2006)

	Total	Government	Private	Commercial	
Total	30,984	169 29,757		1,058	
Passenger cars	23,049	71	22,373	605	
Buses	2,412	25	2,236	151	
Trucks	5,467	55	5,143	269	
Special cars	56	18	5	33	

# (4) Culture & Public Sports

Table 37. Cultural facilities (Research on Health Conditions for Dong-gu, Gwangju for Building Health Dong-gu 2010)

	Performing facilities		Exhibition facilities		Local culture & Welfare facilities		Others		
Year	Public audito- rium	Ordinary audito- rium	Movie theater	Art museum	Gallery	Welfare center	Youth center	Cultural center	Traditional performing arts center
2000	_	6	30	I	34	1	1	1	_
2001	_	6	32	4	12	3	1	1	2
2002	_	6	32	3	12	2	1	1	2
2003	3	3	36	3	12	2	1	1	2
2004	3	3	38	3	12	2	1	1	2
2005	2	3	38	3	13	1	1	1	2

There are 3 libraries(Gwangju Student's Hall, Central Library, Sansu Library) in Dong-gu as of 2005 with 4,295 total seats. There are 978,823 users annually with 1,414,705 books rented.

Table 38. Public libraries (Dong-gu Statistical Yearbook, 2006)

				No. of co	ollection	Annual	Annual
Year	Staffs	Libraries	Seats	Books Non- us books		users	books lent
2000	80	3	3,707	344,326	_	1,560,088	1,854,463
2001	71	3	3,429	375,259	_	1,384,878	1,719,509
2002	72	3	3,401	401,186	_	1,114,607	1,513,519
2003	72	3	4,067	421,410	5,724	999,813	1,570,971
2004	73	3	4,067	449,568	13,215	1,023,555	1,335,467
2005	75	3	4,295	465,764	7,225	978,823	1,414,705

Table 39. Public sports facilities (Dong-gu Statistical Yearbook, 2006)

Year	Gymna -siums	Sports complex	Swim -ming pools	Exercise hall	Bowlin g alley	Golf practic e range	Physical training center	Aerobic center
2000	_	3	_	17	4	4	15	14
2001	_	3	_	16	3	5	20	13
2002	_	2	_	17	4	7	17	11
2003	-	2	_	21	4	8	18	11
2004	1	1	1	23	4	7	18	8
2005	1	2	1	23	4	7	18	8

# 6. SOCIOECONOMIC CONDITION

## (1) Education

Looking at number of schools, students and teachers in Dong-gu[Table 40], although number of schools and students have been decreasing since 2002, because number of teachers are maintained at certain level, number of students per teacher is decreasing each year. There are various educational institutions from kindergartens to universities, and there are 43,372 university students (including graduate students and 2 year college students) which account for 68.4% of total students[Table 41].

Table 40. Summary of schools (Dong-gu Statistical Yearbook, 2006)

Year	No. of school		Students			rs	No. of students	
100		Total	Male	Female	Total	Male	Female	per teacher
2000	54	60,831	36,362	24,469	1,684	1,145	539	39.3
2001	54	66,195	41,770	24,425	1,709	1,137	572	36.7
2002	54	65,463	41,129	24,334	1,769	1,125	644	36.4
2003	48	64,445	40,390	24,055	1,760	1,105	655	35.8
2004	48	63,465	39,412	24,053	1,724	1,072	652	35.8
2005	47	63,367	37,560	22,861	1,778	1,051	727	35.3

Table 41. Number of students and teachers per educational institutions, 2005 (Dong-gu Statistical Yearbook, 2006

Year	No. of		Students			Teache	rs	No. of students
roar	school	Total	Male	Female	Total	Male	Female	per teacher
Kindergarten	18	813	415	398	53	_	53	15.3
Primary School (National & Public)	11	7,782	4,059	3,723	321	70	251	24.2
Primary School (Private)	1	616	312	304	21	12	9	29.3
Middle School (National & Public)	4	2,260	1,320	940	115	45	70	19.7
Middle School (Private)	3	1,840	815	1,025	86	47	39	21.4
General High School (National & Public)	3	3,068	882	2,186	190	83	107	16.1
General High School (Private)	3	3,120	923	2,197	193	119	74	16.2
Junior college	2	9,530	7,884	1,646	111	94	17	85.9
College & University	1	31,258	20,524	10,734	688	581	107	45.4
Graduate School	1	2,584	1,390	1,194		대학	과 겸임	

# (2) Traffic Accidents

Table 42. Traffic accidents by year (Dong-gu Statistical Yearbook, 2006)

Voor	Number	dooth	iniurios		E	By types	of cars		
Year	ear of dea cases	death	injuries	Passeng er car	bus	freight	Special	2 wheels	other s
2000	942	9	1,196	589	145	127	_	80	1
2001	1,029	20	1,368	633	171	139	_	82	4
2002	858	18	1,184	506	125	110	_	59	58
2003	888	23	1,263	544	126	126	1	45	46
2004	760	21	990	482	132	88	_	58	
2005	776	6	1,150	472	139	90	_	56	19

## (3) Crime

The number of crimes committed in Dong-gu has been declining since 2003. There were a total of 8,277 crimes that occurred in 2005, and Offences other than criminal code accounted for the most with 3,315 cases(40.0%) followed by intellectual crimes with 1,857(22.4%), crimes of violence 1,561case (18.9%), and Larceny with 1,207 cases (14.6%) in that order, and crimes committed by barbarous offenders also occurred 71 times(0.9%).

Table 43. Criminal offenses by year (Dong-gu Statistical Yearbook, 2006)

Year	Felony offences	Thefts	Violent offences	Intellectual offences	Other criminal offences	Offences other than criminal code	Total
2000	108	1,076	2,293	1,783	256	4,136	9,652
2001	103	1,099	2,320	1,936	294	4,163	9,915
2002	76	1,199	1,801	1,722	275	4,863	9,936
2003	103	1,193	1,624	2,399	222	4,662	10,203
2004	94	1,300	1,536	2,536	299	3,904	9,669
2005	71	1,207	1,561	1,857	266	3,315	8,277

# (4) Fire

Fire accidents in Dong-gu is 100~150 cases every year and it has been increasing since 2003. In 2005, 151 fires occurred causing a total of 479,728,000 Won in damages, and resulting in 8 human casualties, and those caused by mistakes accounted for the most[Table 44].

Table 44. Fire incidents by year (Dong-gu Statistical Yearbook, 2006)

Year	No. of Fire Incidents				Amount of Property Damaged(1,000 won)				Casualties		
	Total	Acciden t	Arson	Others	Total	Immovable Property	Movable Property	Total	Death	Injury	
2000	129	117	8	4	356,643	182,669	173,974	11	1	10	
2001	144	130	8	6	638,162	297,283	340,879	11	3	8	
2002	99	77	11	11	569,539	311,242	258,297	14	1	13	
2003	98	70	16	12	510,064	251,737	258,327	9	1	8	
2004	124	101	13	10	261,423	138,213	123,210	20	4	16	
2005	151	130	14	7	479,728	299,995	179,733	8	1	7	

## 7. HEALTH SERVICE AND INFRASTRUCTURE

## (1) Dong-gu Health Center



## 1) Organization

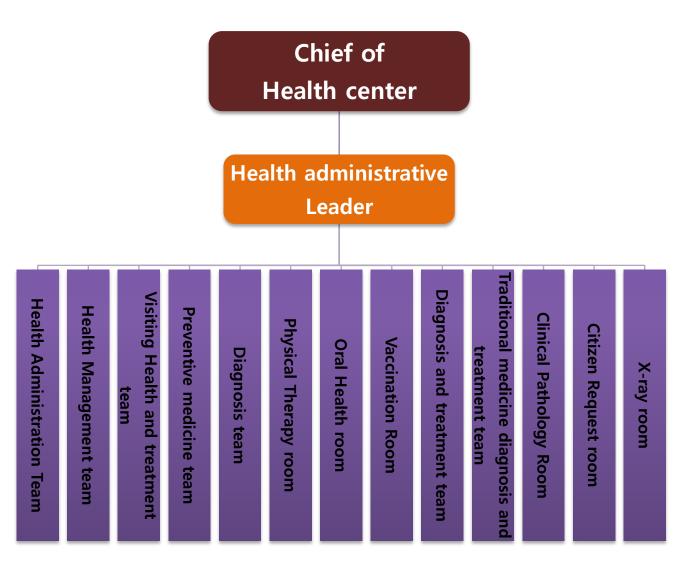


Chart 23. Dong-gu health center organizational structure (Dong-gu health center, 2007)

#### 2) Community Health and Medical Plan(phase 4)

A. Course of change in regional health and medical treatment plan

The First Period

• Before 1998

The Second Period

• After 1999

The Third
Period
(2002~2006)

- Add health projects; mental health, CBR, smoking, hypertension, dia betes, cancer projects
- Initiate key projects; visiting health service, hypertension, diabetes
- Initiate by year

The Fourth
Period
(2007~2010)

- Initiate innovative projects; silver later days management, recycle quality recall, overcoming cancer partnership, U-health, early alarming for epidemics
- Initiate important subjects; old people, chronic diseases, healthy life
- Longterm care service
- New health plan 2010
- Improvement of health equity

Regional Health and Medical Treatment Plan which started from the 1<sup>st</sup> Regional Health and Medical Treatment Plan is freshly starting with the 4<sup>th</sup> plan.

During the 3<sup>rd</sup> plan, health and medical project has met a turning point with addition of mental health project, Regional society based rehabilitation project, the smoking project, the hypertension and diabetes management project, and the caner project as health center activities were diversified.

Especially regional Social connection was revitalized as the visiting health and medical project and hypertension and diabetes management project were initiated as core projects, and we have accomplished good results even in many evaluations for health and medical projects.

With the 4<sup>th</sup> Regional health and medical treatment plan, we are trying to specialize the health and medical project by considering changes due to the policies of the country and strengthening capabilities of regional society with ideas of heath renovation projects.

# B. Regional Health and Medical Treatment Plan Forming Direction

The fourth Dong-gu Regional Health and Medical Treatment Plan Report which presented "Building health Dong-gu" as its vision is planned to aggressively respond to outside factors and internal factors with the health and sanitation project that is in the process based on the 3<sup>rd</sup> regional health and medical treatment plan as its basis.

Health Plan 2010 which presented health goal for 2010 and the caring for senior system which is going to be initiated in 2007, 'Enhancing health for seniors in Dong-gu, Gwangju" which is tried for the first time in the nation and senior health and sanitation policy initiatives, and building health centers and citizen physical exercise centers are the key factors of The fourth Dong-gu Regional Health and Medical Treatment Plan

#### C. Main Initiating Projects

Reorganizing local heath and medical system for local conditions

•forming health and medical services plans by year

Building private sector network and infrastructures

- •allocating roles between public sectors and private sectors
- •forming links with private medical institutions

Integration, link and adjusting health and medical, administrative and welfare areas

•providing one-stop services linking heath, medical , administrative and welfare areas

Building local health medial information system

- building visiting health information systemU-Health
- •initiating early alarm systems for contagious diseases

Initiating innovative health projects

- •recycled products recall services for people with disabilities
- 'Bitgoeul Silver light', Old age management business
- partnership to overcome cancer

Initiating disease prevention projects

- young children screening projects
- disinfecting regions that lack prevention of epidemic
- •immunization for appropriate time by season and by age

Revitalization of projects for healthy living practices

- •forming atmospheres for Healthy living practices and starting specific programs
- •high quality Health Check service business for low income class

Strongly recommend senior health business

- •disease prevention programs and health education programs for seniors
- •initiating insurance services for caring of seniors at the same time

## (2) Health Resources

#### 1) Medical Institutions & Human Resources

There are three general hospitals(Chonnnam National University Hospital, Chosun University Hospital, Seonam University Hospital) including two 3<sup>rd</sup> level medical institutions in Dong-gu along with 379 health and medical treatment agencies with 2,814 hospital rooms. There are abundant health and medical human resources with 1,060 medical doctors, 159 dentists, 31 traditional medical doctors, 1,342 nurses and 205 pharmacists.

Table 45. Overview of number of institutions and medical human resources by types of medial institution (2005, Community Health and Medical Plan, phase 4)

		Room s	Num	ber of d	octors		Phar	Amb	Emer genc
Institutions	Numb er		Medical doctors	Dentis ts	Traditional medical Doctors	Nurses	maci sts	ulan ces	y Resc uer
Health center	155	503	165			238			
Hospital	1	87	9			23	1	1	
General Hospital	1	122	10			35	1	1	
3 <sup>rd</sup> medical institution	2	1,510	814			822	45	5	
Mental institution	1	216	4			11	1	1	
Psychiatrist	5		5			9			
other(special)Ho spital	1	275	4			19	1	1	
Dentist hospital	57	5		159		100			
Traditional medicine hospital	36	1			31	43		1	
119 Emergency center	1		14			12		2	3
Emergency medical center	2	95	35			30		2	2
Pharmacy	117						156		
Total	379	2,814	1,060	159	31	1,342	205	14	5

## **Chonnam National University Hospital**



♦ Construction total area: 89,734 m²
 ♦ Number of hospital rooms: 834

♦ Number of visiting patients: 791,590 (2005)

#### **Chosun University Hospital**



**♦ Site area: 67,095 m²** 

♦ Construction total area: 28,324 m²♦ Number of hospital rooms: 650

→ number of hospitalized patients(annual figure): 186,642 (2005)

♦ Number of visiting patients : 287,742 (2005)

Table 46. Number of medical institutions & human resources by dong (2005, Community Health and Medical Plan, phase 4)

		Madiaa	Healt		0	Number	of doc	tors		Ni mis a n
District	Populat ion	Medica   Doctor   s	h insti tutio n	Hospi tal	Gener al Hospi tal	Medical doctors	Dentis ts	Traditi onal medic al Docto rs	Number of nurses	Number of pharma cist
Chungjang- dong	6,381	78		1	1	80	36	2	164	53
Dongmyeong -dong	6,545	4				4	2	2	7	3
Gyerim 1- dong	9,032	28		1		28	2	1	37	10
Gyerim 2- dong	8,706	21				21	3	4	26	7
Sansu 1- dong	10,888	18				18	2	3	23	7
Sansu 2- dong	12,228	16				16		2	21	6
Jisan 1- dong	5,865	4				4	1	1	5	2
Jisan 2- dong	6,810	10				10	1	1	15	5
Seonam- dong	5,870	21	1		1	366	97	2	463	41
Hak-dong	9,189	27			1	478	5	4	519	56
Hakwoon- dong	14,424	16		1		22	5	7	36	10
Jiwon 1- dong	9,798	5				10	2	2	18	3
Jiwon 2- dong	8,789	3				3	3		8	2
Average	8,810	19	0.1	0.2	0.2	81.5	12.2	2.4	103.2	15.8

#### 2) Social Welfare Facilities

There are 14 Social Welfare facilities as of 2005 in Dong-gu with 1,374 licensed staff members, and 1,421 people are using the services per day on average.

Table 47. Social Welfare Institutions and Inmates (2005, Community Health and Medical Plan, phase 4)

	Facilities	Licensed staff(person)	Inmates (daily average)
Children	6	434	450
Aged	2	148	160
Women	1	20	23
Disabled	2	187	192
Other	3	585	596
Total	14	1,374	1,421

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Suncheon District Profile

KNHANES Ⅲ, 2005 (Ministry of Health & Welfare)

# **ANALYSIS OF PRIORITY HEALTH PROBLEMS**

# 1. Summary of present conditions of Regional Society

#### A. Strength of Dong-gu, Gwangju

- High interest level and aggressive support from head of local self-government entity.
- It emphasize senior population related health and welfare projects considering the fact that senior population of Dong-gu is very high, and head of the gu office is aggressively supporting the paralysis and dementia management project with a lot of interests.
- Number of population(115,000) is appropriate size for providing health and medical treatment services.
- Number of population(2,500) per staff is appropriate size compared to other regions.
- There are abundant health related human resources as it is the center of Metropolitan city with concentration of medical institutions.
- Medical institutions and health related resources are concentrated, and it is easy to approach the center part of Gwangju city.
- Cooperative system with University hospitals and health business related institutions.
- Cooperation is easy as cooperative systems with 2 University hospitals, general hospital, and social welfare institutions are well constructed.

# • Chronic disease management project and healthy life exercising project systems are well constructed.

- With aggressive support from Gwangju Metropolitan city, many institutions and experts are participating from the beginning.

#### B. Weaknesses of Dong-gu, Gwangju

#### • Population of seniors over 65 years old is at 11% and increasing.

- Due to City communal systemization phenomenon, as young and affluent classes of the population are moving to new urban development area, the percentage of senior population is clearly increasing with the issue of population decrease.

#### • High percentage of medical service lacking population.

- Medical subsidy receiving population rate is higher for Dong-gu(7.4%) compared to Gwangju-si(5.5%).

#### High morbidity rates for major diseases.

- Looking at morbidity rates for major diseases per 100,000 people(as a result of health check), hypertension at 103(Gwangju-si 90 people) and Diabetes at 107 people(Gwangju-si at 137 people) are higher than other gu districts.

#### • Financial independence rates for local self-government entities are low.

# 2. Selecting preferred projects for local social health

## A. Fast growth of senior population

- ▶ Dong-gu has the lowest population among 5 Gu districts of Gwangu Metropolitan city, and lowest in population density after Gwangsan-gu. Number of households is also the lowest and population per household also is the lowest among the five gu districts.
- ▶ The percentage of senior population over 65 years old is higher than that of Gwangju Metropolitan city(7.1%), and it is quickly increasing from 7.6% in 1999 to 9.8^ in 2003 and 10.9% in 2005.
- ▶ In Dong-gu's case, it seems that the senior population percentage is going up because young people are moving to the new development areas outside of Gwangju Metropolitan City, and this is related to national low birth rate and aging phenomenon, and we need to come up with systematic and comprehensive approach especially about senior population together with diverse policies.
- ▶ In population by medical insurance type, Dong-gu had more medical subsidy receiving population than other Gwangju regions with 7.4%, and additionally senior population living by alone at 2.4% and people with diabilities at 4.0, and basic living support receivers at 4.6% were higher than other regions, thus it's needed to strengthen health services for these groups.
- ▶ Build "Dong-gu where seniors want to live" through business systems that can initiate programs related to seniors, provide health enhancing programs for seniors to maintain appropriate health habits and enable seniors with chronic disease to self control his conditions.

# B. Effective management of chronic diseases

- ▶ Because morbidity rates of hypertension, diabetes, and Hyperlipidemia among major diseases are higher than the average for Gwangju-si, it's necessary to form a plan to comanage by appropriate allocation of responsibilities among public and private medical institutions.
- ▶ Considering that doubt rates are increasing from 12.0% in 2003 to 13.0% in 2005 and senior population rates are higher than other regions and increasing according to the result from performing early dementia tests for seniors in the jurisdiction of Dong-gu, we need to expand health programs for dementia step by step and systematically.
- ▶ Because Dong-gu is operating "Silver Aging Control-Dimentia Project", we need to continuously try to expand it.
- ▶ Depending on central government's desire to carry out the senior caring project, there is a need for research and review for applying this project in Dong-gu.
- ▶ There is a need for building infrastructures to support reorganizing visiting health service systems for inhibiting disease occurrences and running effective operations.

## C. Diffusion of healthy living practice

#### ► Smoking rate

- Although Dong-gu's smoking rate is generally lower than the national average, because the smoking rates for 30s and 40s were higher than other Gu districts, it's import to develop approaching strategies to emphasize necessity of stop smoking.

#### Drinking rates

- Drinking rates for males adults in Gwangju were at 66.5%, thus similar to the national average for men(68.6%), and we estimate that it would be similar for Dong-gu.
- However, the drinking rate for over 60 years old is higher than the national average, and the drinking rate for population over 70 year old is significantly higher, thus it's necessary to start various projects with a goal of improving drinking habits for these groups.

#### **▶** Nutrition

- We need to come up with diverse plans to continue and enhance effect of school nutritional projects because obesity rates for elementary school students in the jurisdiction are steadily decreasing compared to the previous year, and we need to have comprehensive health and welfare plans to increase interests and participation of private sectors together with forming appropriate nutritional enhancement plans especially for low income class and seniors who are alone.

#### ► Physical exercise practice

- Need to continue physical exercise providing projects to increase physical exercise practice rates, and need to revitalize atmospheres of local society by using various local events such as Chungjang-ro Festival.
- Need to evaluate physical exercise practice enhancement rates together with exercise practice and education consulting after researching current situations by forming a team with nutritionist and social welfare staff member for low income class and seniors living alone.

#### ► Cancer

- Dong-gu's Cancer rates were generally higher than Gwangju Metropolitan city, and given that the lung cancer rates and liver cancer rates for men and thyroid gland cancer rates for women are significantly higher than Gwangju, it's necessary to have regional health education programs for cancer prevention and early detection programs for cancer.

## D. Managing dental health

- ▶ According to the dental health Survey taken for kindergartens and elementary schools in Dong-gu, Dental Cavity Situation is seriously worsen than other major cities. Thus, we need to aggressively initiate dental cavity prevention project(fissure sealant), and fluoride mouth rinsing program.
- ▶ Need to initiate preventive activities for all age groups including dental hygiene education, right way of brushing, regular dental health check, and scaling by continuous cooperation with related institutions.

## E. Building a health supportive environment

- ▶ Environmental problems including continuous increase of number of vehicles(30,984 cars in 2005) and Air Pollution (Exceeding the standard by PM10) and noise issue for residential areas are affecting the health of Dong-gu residents.
- ▶ Parks and green areas provide sentimental pleasantness and pleasant living environment and comfortable rest areas. Although there are 11 parks in Dong-gu as of 2005 up from 8 in 2000, and Parks and green areas(excluding 1 State Park) per person is below the minimum standard(6 m²) according to the City Park Law at only 2.19 m² per person.

## **PREPARATION**

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