

*Overview of Reproductive
Health Indicators in Korea*

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Chapter 1

Introduction

Why is reproductive health so important? The answer is multifaceted. Reproductive health is a crucial component of general health and affects everybody. It has developmental and intergenerational components, reflecting health in childhood and adolescence and setting the stage for health beyond the reproductive years for both women and men.

Within the framework of the WHO's definition of health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, reproductive health addresses the reproductive processes, functions, and system at all stages of life. Reproductive health therefore implies that people are able to have a responsible, satisfying, and safe sex life, and that they have not only the capability to reproduce but also the freedom to decide if, when, and how often to do so. Implicit in this last condition are the rights of men and women to be informed of and to have access to safe, effective, affordable, and acceptable methods of fertility regulation of their choice. Furthermore this entails the right of access to appropriate health services that will

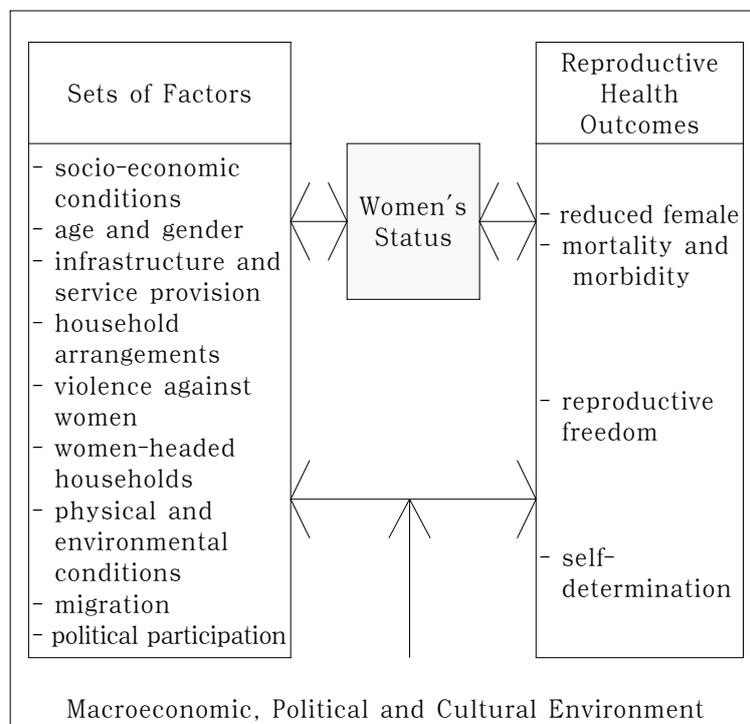
enable women to safely go through pregnancy and childbirth and will provide couples with the best chance of having a healthy infant (WHO, 1994). Though reproductive health is a social issue in human development, most societies still relegate women to a reproductive role.

A conceptual framework is essential for a common understanding of the scope of women's health. Figure 1 lists some of the factors that affect women's health and illustrates the complexity and diversity of factors involved. It demonstrates that women's status is a crucial factor that enhances or undermines women's health. The reproductive health framework identifies nine sets of factors crucial to reproductive and women's health. Factors affecting reproductive health and women's health include socioeconomic factors, age and gender, infrastructure and service provision, household arrangements, violence against women, women-headed households, physical and environmental conditions, migration and political participation (Cairncross, 1990: 1).

As shown in Figure 1, infrastructure and service provision include the quality and quantity of water, the provision of sanitation and drainage facilities, garbage disposal, health care services and public transport. Macroeconomic, political and sociocultural factors all exert considerable influence on women's health (Conia, 1987). Ultimately reproductive health is

affected by the interrelationship of diverse and complex factors, and reproductive health indicators are grouped into four parts: demographic indicators, socioeconomic indicators, health indicators and population policies (Cairncross, 1990:2).

Figure 1. A Reproductive Health Framework



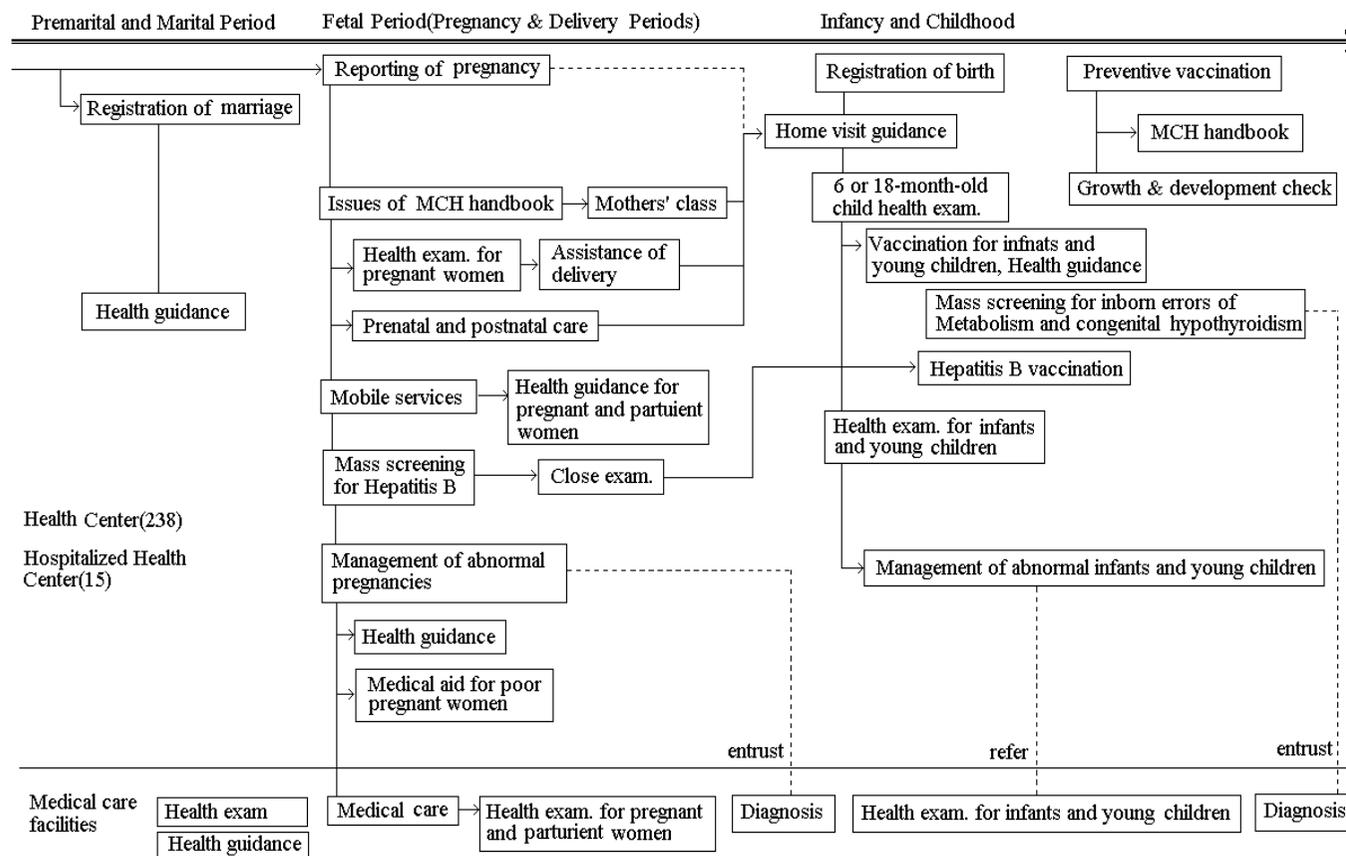
Source: Cairncross et. al., *The Poor Die Young: Housing and Health in Third World Cities*, 1990, pp.1~24.

Policies and programs related to women's health in the Republic of Korea have focused mainly on

family planning, which was initiated in 1962 by the government as part of its Five-Year Economic Development Plan for the purpose of controlling fertility, and have not considered the broader picture of women's health over the last three decades. The government started providing free contraceptive services with the assumption that the availability of contraceptives would help the motivation for family planning. The mid-1970's were highlighted by the introduction of social support policy measures with numerous incentive schemes, such as a reduction in child delivery charges for sterilization accepters after their second delivery, priority in allotting public housing to sterilization accepters with two children and income tax exemption for up to two children. Owing to strong government population control measures, Korea was able to achieve its demographic transition within a relatively short period of time and has reached a below-replacement level fertility.

In response to these changes the government has been adjusting its direction from increasing contraceptive supply for birth control to quality-oriented programs, such as sex education for the youth, prevention of induced abortion, and other maternal health programs (see Figure 2).

Figure 2. Flow-chart of Maternal Health Program



According to the Demographic-Economic Model developed by Suit and Mason, demographic changes involve an various economic and social factors pertaining to production, per capita income, employment and education(Mason, 1986). Korea is no exception in this respect. It is commonly recognized that population control in Korea affects socio-economic development, and this in turn influences on women's health improvement.

In II, III, and IV, I will review the reproductive health status according to selected indicators since the 1960s in Korea. Recommendations for reproductive health policies will be presented in the last chapter.

Chapter 2

Demographic Indicators

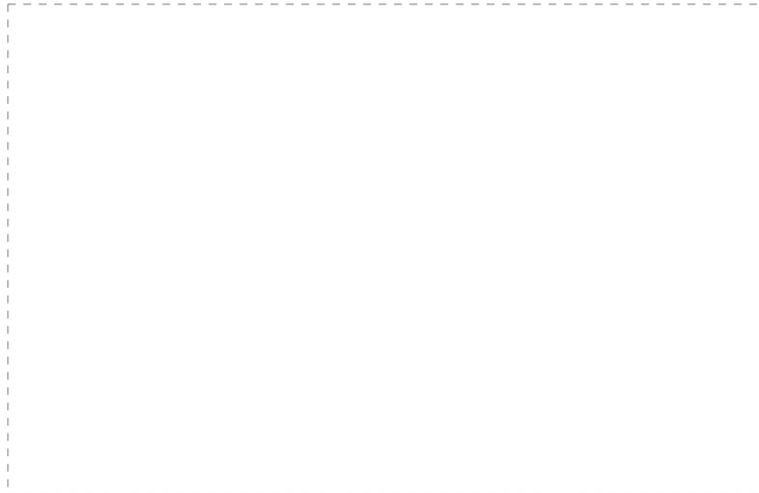
Population Characteristics

Total Population and Natural Increase Rate

The size of a country's population is a key indicator of that country's reproductive health. Population size is determined by the levels of fertility and mortality, as well as by international migration(WHO, 1995:18).

Korea's population structure in 1960 was typical of a country with high birth and death rates. As shown in Figure 3, the crude birth rate(CBR) in Korea declined from 43.0 in 1960 to 15.2 in 1995, and the crude death rate(CDR) from 13.0 to 5.9 per 1,000 population during the same period. As a result, the natural increase rate(NIR) declined drastically from 30.0 to 9.3 per 1,000 population over the 1960~1995 period. It is said that recently socioeconomic development contributed to fertility decline in the form of changes in attitudes toward the small family norm and family planning. Improvements in the standard of living, sanitation and medical technologies and the increase of health utilization have all contributed to the mortality decline.

Figure 3. Changes in Vital Rates



Sources: 1) EPB, *Population and Housing Census*, 1973, p.253.
2) NSO, *Social Indicators in Korea*, 1980, p.40,
1993, p.41.
3) NSO, *The Future Estimated Population*, 1991.

In 1990, the population pyramid had been transformed into a pot shape. Based on the 1995 population census, 1995 population of 44.6 million in contrast to 25 million in 1960(see Figure 4).

Figure 4. Total Population and Age Structure



Sources: 1) NBOS, EPB, *Population census data*, each year
2) NSO, *Preliminary Count of Population and Housing Census*, 1995

Women of Reproductive Age

This indicator is crucial as it looks not only at pregnant women, but at all women of reproductive age to assess the absolute and relative risks of reproduction, fertility control and abortion(Sai, 1989). The women of reproductive age, usually defined as the segment of the female population between 15 and 44 years of age, accounted for 43.2 per cent of the total female population in 1960. This segment of the population increased to 52.2 per cent in 1995. It is important to recognize the fact that the number of reproductively capable women is increasing, and these are now twice as many as in 1960(see Figure 5).

Figure 5. Reproductive Age Distribution of Total Females



Sources: 1) NBOS, EPB, *Population census data, each year*
2) NSO, *Social Indicators in Korea*, 1995, p.31

The Sex Ratio

The sex ratio is defined as the number of male per 100 females, considered at birth and in the population at large. Reliable statistics from developed countries covering the past 200 years show that the sex ratio at birth is biologically stable in the absence of social and behavioral interference, and this figure is set at around 106.

The use of fetal-screening technologies for sex identification in Korea was outlawed in 1987, and the medical code was further strengthened in 1994 in an attempt to prevent this practice. However, sex selective abortions are still being performed in Korea,

which is problematic because the sex ratio at birth is alarmingly high. Since the 1980s the sex ratio at birth in Korea has been at a higher level than expected increasing from 106.9 in 1982 to 113.6 in 1988, and has been attributed to sex selection procedures by a large number of parents. The sex ratio at birth was 115.5 in 1994, and the ratio increases according to the birth order (1st birth 106.1; 2nd birth 114.3; 3rd birth 205.9; 4th birth 237.7). This means that legal restrictions alone are not effective particularly after second birth, when a cultural preference for sons persists in society. In addition, it means that many of the induced abortions have been conducted in case of unwanted gender in Korean society. The alleviation of gender inequalities in society may be the most effective way of ending this practice.

Fertility

Total Fertility Rate

With the successful implementation of economic development plans based on the government's Five-Year Economic Development Plan and population policies over the three decades, there has been a great reduction in population growth and fertility rate.

The total fertility rate, which refers to the number of children a woman will have during her lifetime, decreased from 6.0 to 1.6 during the period of 1960~1990, reaching its lowest point in 1990. In 1993, total fertility rate increased slightly to the level of 1.8. The decline was observed over the all age categories(see Table 1).

Table 1. Changes in Fertility Rate

Year	Total fertility rate	Age-specific fertility rate (per 1,000 female)						
		15~19	20~24	25~29	30~34	35~39	40~44	45~49
1960	6.0	37	283	330	257	196	80	14
1966	5.4	15	205	380	242	150	58	10
1970	4.3	18	185	307	197	101	44	13
1975	3.5	11	159	276	164	74	29	3
1980	2.8	8	168	263	93	24	5	-
1985	1.7	9	119	162	40	8	2	-
1990	1.6	3	62	188	50	7	1	-
1993	1.8	3	71	195	64	15	1	-

Source: 1) NSO, *Social Indicators in Korea*, 1980, p.41, 1990, p.62.
2) KIHASA, *National Family Health Survey Report*, 1994.

The Main factor which account for the rapid fertility decline is the establishment of a small family norm, as a result of this, high contraceptive practice behavior and a high rate of induced abortion. As shown in Table 2 the experiences of induced abortion among married women, according to the National Family Health Survey, accounted for only 7 per cent

in 1963. However, by 1994 this figure increased to 49 per cent.

Table 2. Induced Abortion Rate of Married Women

Year	experience rate of induced abortion(%)
1964	7
1967	14
1976	38
1982	50
1985	53
1988	52
1991	53
1994	49

Sources: 1) KIFP, *Population and Family Planning Statistics*, 1978.
2) KIPH, KIHASA, *National Family Health Survey Report 1982~1992*, 1994.

The Contraceptive Prevalence Rate

The contraceptive prevalence rate significantly increased during the period 1970~1990. In 1994, 77.4% of all married women aged 15~44 practiced contraception. Therefore, almost all married women, except for those experiencing menopause, those naturally sterile, and those temporarily separated from their husbands(these women comprised 3.5% of all married women) practice family planning. The contraceptive methods currently used by married women in 1994 were tubal ligation(28.6%), vasectomy (11.6%), condom(10.2%), IUD(9.0%), rhythm method (7.0%), oral pill(3.0%) and other methods(2.9%).

Female sterilization accounted for about 4.1 per cent of contraceptive users in 1976, and this proportion had risen to nearly 30 per cent in 1994.

Despite the high contraceptive prevalence rate since 1980, the experience rate of induced abortion accounted for more than 50 per cent in the same period, as can be seen in Table 3 and this is significant.

Table 3. Contraceptive Prevalence Rate of Eligible Women by Method

(Unit: %)

Year	Contraceptive prevalence rate	Temporary method	Sterilization (female st.)
1970	24.4	21.1	3.3 (-)
1976	44.2	35.9	8.3 (4.1)
1979	54.5	34.1	20.4 (14.5)
1985	70.4	29.9	40.5 (31.6)
1991	79.4	32.1	47.3 (35.3)
1994	77.4	37.2	40.2 (28.6)

Sources: 1) KIFP, *Population and Family Planning Statistics*, 1978.
2) KIPH, *National Family Health Survey Report*, 1992.

Chapter 3

Health Indicators

The general health status of the people has improved greatly in the past three decades as borne out by the changes observed in health indicators such as prolonged life expectancy and decreased population-doctor ratio. The life expectancy at birth has increased for females from 53.7 years in 1960 to 75.7 in 1992, which is a 17 year extension of life expectancy in 32 years. For males, the Table 4 rose from 51.1 to 67.7 in the same period.

Table 4. Changes in Major Health Indicators

Year	1960	1965	1970	1975	1980	1985	1990	1994
Life expectancy at birth(year)								('92)
Male	51.1	58.1	59.8	n.a	62.7	64.9	67.4	67.7
Female	53.7	64.7	66.7	n.a	69.1	73.3	75.4	75.7
Population/doctor ratio(person)	3,332	2,645	2,159	2,100	1,690	1,379	1,007	817
Population with piped water supply(%)	16.9	21.2	32.4	42.4	54.6	66.6	78.5	82.1
Population coverage of national health security program(%)	n.a	n.a	n.a	n.a	29.8	51.8	91.1	95.3

Sources: 1) MOHSA, *Yearbook of Health and Social Statistics*, 1991, pp.4~5
 2) NSO, *Social Indicators in Korea*, 1995.

Related to the improvements in the health sector, the expansion to a larger segment of the population of a medical insurance system in 1989 has played a key role in enhancing the utilization of health services and upgrading the level of health for women. The service utilization rates which are directly related to the maternal health status indicate a lot of progress since the expansion of medical insurance.

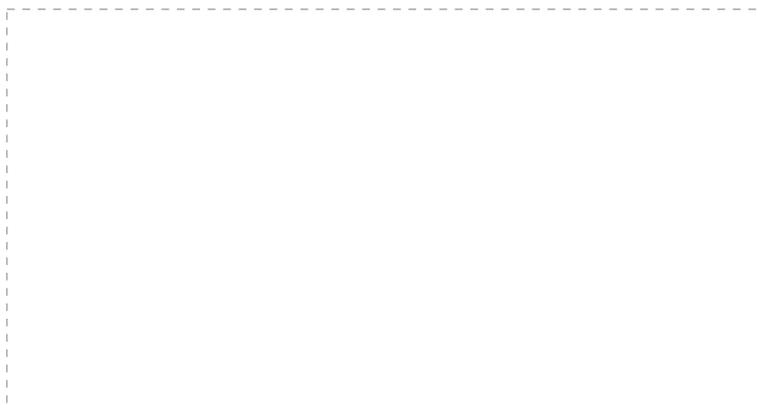
Infant Mortality Rate

The infant mortality rate is an important component in the level of life expectancy and a key determinant of the reproductive health status of women of child-bearing age.

The infant mortality rate over the past 30 years has fallen dramatically thanks to the improved living conditions as well as to the increased health utilization. From 1960 to 1992, the infant mortality rate per 1,000 live births decreased from 69.0 to 12.8. It was reported that the infant mortality rate was 12.8 per 1,000 live births as of 1992(see Figure 6).

The major cause of infant death was congenital malformation and certain conditions originating in the perinatal period.

Figure 6. Changes in Infant Mortality Rate



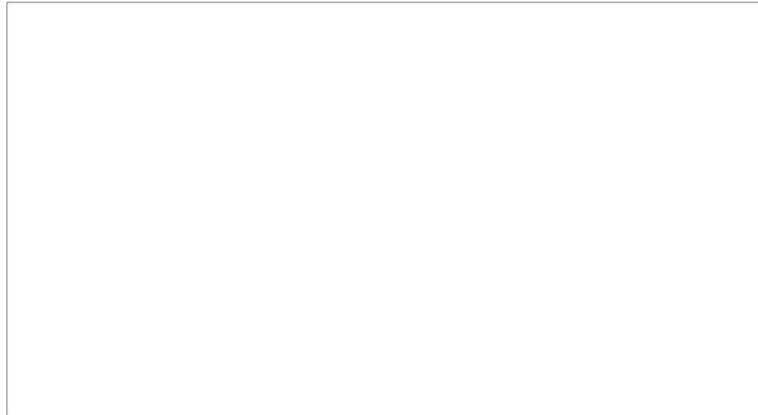
Sources: MOHSA, *Yearbook of Health and Social Statistics*, each year.

Maternal Mortality Ratio

It is reported that the maternal mortality ratio per 100,000 live births fell from 88 in 1965 to 30 in 1992(see Figure 7).

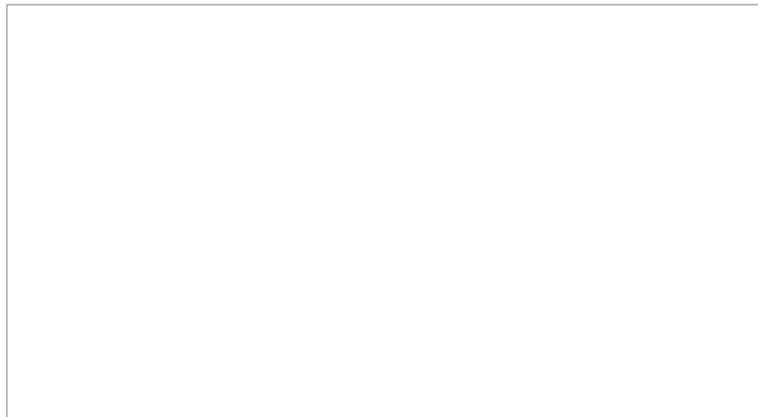
The results of some hospital studies, as seen in Figure 8 indicate that toxæmia was the most common cause of death from 1961 to 1966, and it accounted for 51.8 per cent of all maternal deaths. Postpartum hemorrhage was the most common cause of death during the period 1982~1986, accounting for 60.0 per cent of all maternal deaths. This problem stems from a failure in the perinatal emergency care system, specifically a lack of transport and an inadequate referral system between primary/secondary and tertiary care facilities.

Figure 7. Changes in Maternal Mortality Ratio



Sources: 1) MOHSA, *Yearbook of Health and Social Statistics*, each year.

Figure 8. Percentage of Cause of Maternal Death:
1961~1986



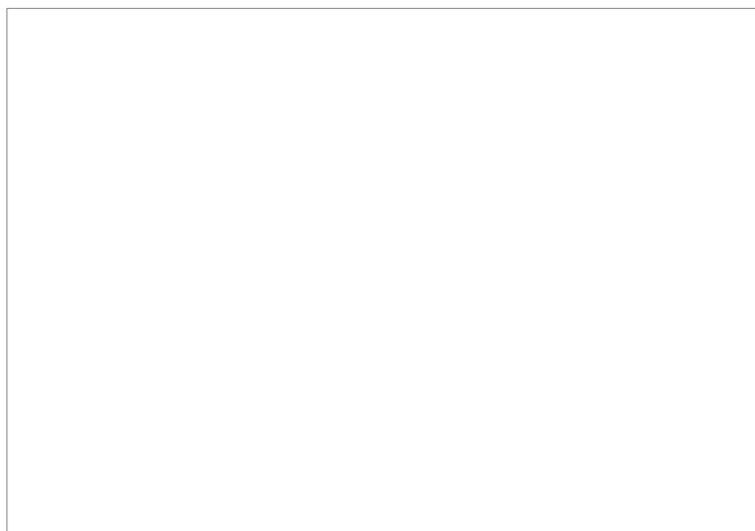
Note : Results are based on medical data, deaths occurring outside the hospital may go unreported.

Sources: Park I.H. and Hwang N.M., *Policy Issues and Development Strategies of MCH Services in Korea*, KIHASA, 1993, p.145.

Women Assisted in Delivery

The proportion of pregnant women receiving prenatal care rose to 99.2 per cent in 1994 from 57.2 per cent in 1977, corresponding to a fifteen year period from the initial start to the achievement of universal coverage of the national medical insurance system. Similarly, 98.8 per cent of all deliveries took place at medical institutions in 1994(see Figure 9). Among those deliveries, 96.2 per cent occurred at hospitals and clinics, while 1.9 per cent were at midwifery clinics and 0.7 per cent at public health care facilities.

Figure 9. Changes in Institutional Delivery Rate



Sources: KIPH, KIHASA, *National Family Health Survey Report*, each year.

Low Birthweight Infants

Low birthweight infants refer to those who weigh less than 2.5 kilograms. Low birthweight is a well known risk factor of infant mortality, and also measures the health status of the newborn and reflects the women's reproductive health status. Unfortunately the statistical data for this indicator is not sufficient in Korea. According to a sample survey in 1993, the birth rate of infants weighing less than 2,500 grams was 7.7 per cent of all livebirths(Park, 1993).

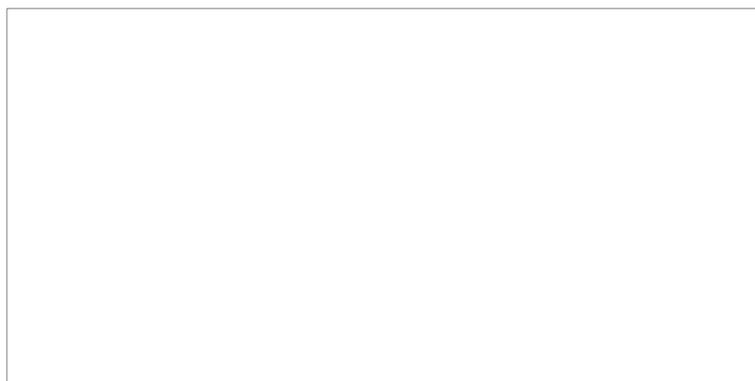
Incidences of Sexually Transmitted Diseases and Acquired Immunodeficiency Syndrome

Sexually transmitted diseases are a major public health problem. The first case of a person identified as HIV positive appeared in 1985 and the first case of AIDS was reported in 1987. By the end of 1995, the total number of persons with HIV was 486. Sexual contact is the leading route of infection, comprising about 90% of the known persons with HIV. Although the HIV/AIDS epidemic in Korea is still in an early phase compared with other countries, Figure 10 show a gradual increasing in women.

Gonococcal infections and syphilis not only cause acute morbidity, health complication, and sequele, but

also contribute to maternal and fetal mortality and adverse pregnancy outcome(WHO, 1994:28). Cumulative totals of treatment cases of gonorrhoea and syphilis in the public sector were 43,000 in 1990 and 38,000 in 1994(MOHW, 1995:69).

Figure 10. Number of Persons with HIV/AIDS by Gender



Source: MOHW, 1995, 1996.

Sexual Experience Rate of Adolescents

Adolescent fertility and sex-related problems have been an area of concern recently. There has been an alarming increase in sex related problems, particularly unwanted pregnancies, abortion, and psychological problems among the youth.

According to a sample survey, 78.1% of unmarried industrial male workers and 36.3% of university male students had experienced sexual

intercourse(KIHASA, 1994). Among them, 34.2% of teen-age industrial workers and 6.2% of the teen-age university students had had a sexual experience. This raises an issue concerning the prevention of HIV/AIDS and STD's because most of their sex partners were prostitutes(industrial worker 80.0%, university student 72.8%)(Lim, 1994).

According to a study conducted in one city in 1990, unmarried women accounted for 32.9% of all induced abortions performed. Some of the reasons for this may be an increased sexual activity among youths and the unmarried. In addition, the number of unwed mothers is also steadily increasing. As a result, there is an increase in the percentage of adopted children of unwed mothers. According to the MOHW, the percentage of unwed mother's children among adopted children was 84.0 per cent in 1992, compared with only 10.7 per cent in the period 1958 ~1960. Given the signs that both abortion and pregnancy among adolescents are increasing, we think it deserves more attention.

Chapter 4

Socioeconomic Indicators

Socioeconomic indicators describes the relative situations of women and men in marriage and the household, literacy and education, and the labour force(WHO, 1995:36).

Marriage and the Household

The minimum legal age at which women can marry is 16 in Korea. Given the legal age of marriage, this indicator examines the average age of females and males at the time of marriage. The development and changes in the economy and society over the last 30 years have resulted in changes in the age at marriage and the lifestyles of women. Table 5 and Table 6 show that women got married at the average age of 21.6 in 1960 and 25.5 in 1990, and the average household size decreased to 3.8 in 1990 from 5.5 in 1960.

Table 5. Age at First Marriage by Year
(Unit: age)

Year	Female	Male
1960	21.6	25.4
1970	25.3	27.1
1980	24.1	27.3
1990	25.5	28.6

Source: NSO, *Population and Housing Census*, 1970~1990.

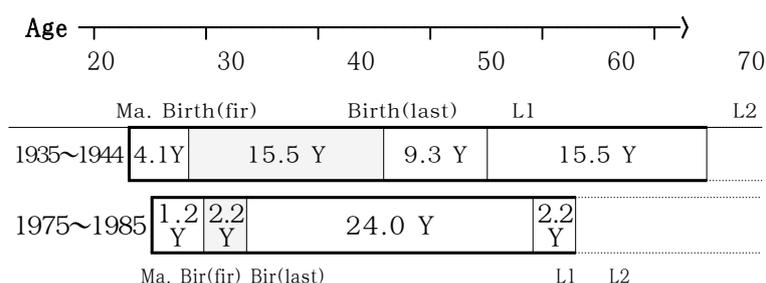
Table 6. Average Number of Household Members
(Unit: persons)

Year	1966	1970	1975	1980	1985	1990
No. of family members	5.5	5.2	5.1	4.6	4.2	3.8

Source: EPB, *Population and Housing Census*, 1966~1990.

Similar to marrying at a later age, a decline in fertility and more nuclear families has brought about changes in the life cycle of women. As seen in Figure 11, the range of years from the time of first delivery to last delivery was estimated to be 15.5 years in the 1940s, whereas it was only 2.2 years in the late 1970s and 1980s.

Figure 11. Life Cycles Changes of Married Women in Korea: 1935~1944 and 1975~1985 Marriage Cohorts



Ma: Marriage

Birth(fir): Birth of 1st Child

Birth(last): Birth of Last Child

L1: 1st Child Leaves Home

L2: Last Child Leaves Home

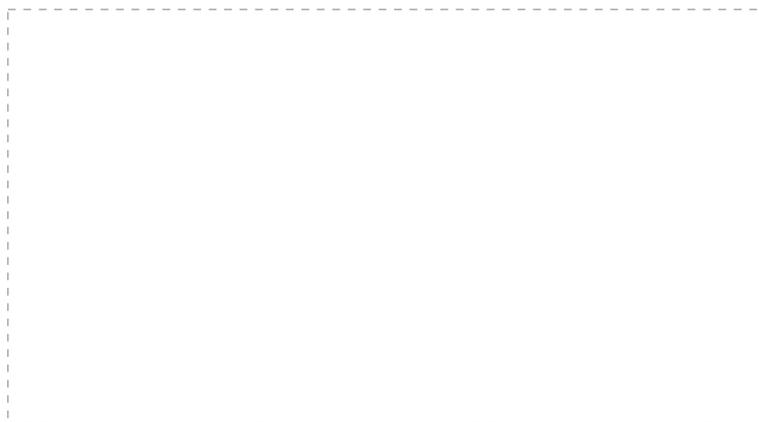
Education

This indicator is another key determinant of reproductive health. Assuming all other factors are constant, female education has a wideranging affect on the improvement of a woman's quality of life(WHO, 1995:37).

The Constitution of the Republic of Korea guarantees educational opportunities irrespective of sex, age or class. An expansion of educational opportunities resulted in a compulsory educational system, which was then accompanied by an increase

in female enrollment at every level of education(see Figure 12). The educational level of the population was substantially raised through the general standard of living, expansionary education policies of the government, and the increasing demand for qualified manpower.

Figure 12. School Enrollment Ratio of Females



Notes : 1) No. of students/Population aged 6 to 11 years
2) No. of students/Population aged 12 to 14 years
3) No. of students/Population aged 15 to 17 years

Sources: EPB, *Social Indicators in Korea*, 1980, p.114.

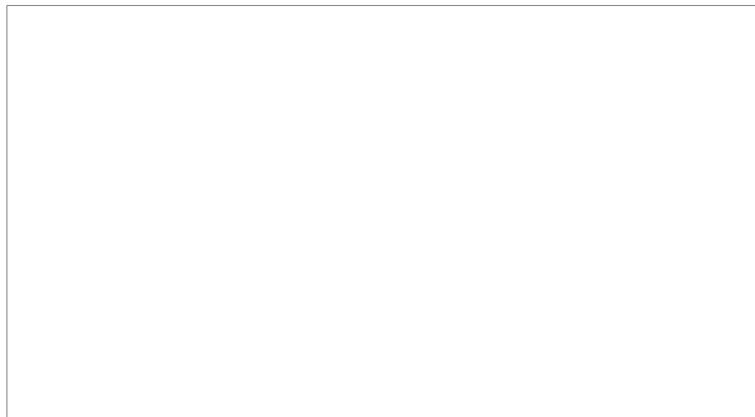
Social-economic Activities

The government's policies have emphasized the systematic ensurance of women's participation in social and economic activities. Accordingly, a Women's Vocational Training Center was set up and

began to recruit trainees in 1991. The participation of women in socioeconomic activities today is at a higher level than ever before. The remarkable economic growth which has been achieved in the past three decades is due in large part to the female labor force in the manufacturing sector.

The female proportion engaged in primary industries has sharply declined in recent years in contrast with an increase in the secondary and tertiary sectors(Figure 13).

Figure 13. Distribution of Female Workers by Industry



Source: 1) EPB, *Population and Housing Census Report*.
2) ____, *Report on the First Employment Structure Survey*, 1983.
3) ____, *Annual Report on the Economically Active Population Survey*, 1983.

In spite of the advances and changes, the employment rate of women in higher academic careers still remains low. Most female workers are still being employed in low-wage jobs where they are exposed to conditions detrimental to their health or are overloaded with work. The Figure 14 shows that the activity rate of economically active females is increasing and that married women's participation rate has also changed(see Figure 15).

Figure 14. Activity Rates among Economically Active Population



Sources: 1) EPB, *Population and Housing Report*, 1960, 1966, 1970~1985.
2) ____, *Annual Report on the Economically Active Population Survey*, 1990, 1995.

Figure 15. Socioeconomic Activity Rate of Married Women



Economic Growth

Because economic conditions affect health status, it should be pointed out that Korea has reached a fairly high level of economic growth as measured by its per capita GNP. Per capita GNP increased from US\$ 87 in 1962 to US\$ 8,483 in 1994 (Bank of Korea, 1994). The quality of living has improved concomitantly with this economic growth.

Chapter 5

Concluding Remarks

Despite the improving status of women's health in Korea, we conclude that no specific objectives related to quality assurance for reproductive health have been set. For example, though contraception is widely practiced, the rate of induced abortions is very high among both married and unmarried women. Induced abortions are not in principle allowed under the Maternal and Child Health Law in Korea except that any of spouses has eugenic disorder and diseases, pregnancy by rape and incest and pregnancy is likely to hamper maternal health. Despite the regulations, however, induced abortion continues to be a big problem in Korea. The reasons for its high rate may be an increased sexual activity among youths and the unmarried, unwanted pregnancy among married women due to contraceptive failure, and the prenatal sex selection because of a preference for sons.

Previously the family planning programs were mainly concentrated on married people, and information about contraception and reproductive physiology etc. was not easily available to the high risk population, especially youths. Moreover, although Korean society

is rapidly becoming modernized, sex norms are still very restrictive. Adolescents have displayed a strong desire to receive information about reproductive physiology and contraception, but they have little opportunity to do so. In the future, through sex education for students and young workers, the government hopes to reduce induced abortion.

The still high maternal and infant mortality rate are caused by the problem of a poor system of obstetrical emergency medical care, and one of the major reasons is an unsettlement of perinatal emergency care system in the community. It is to be settled regionalization and emergency medical system for perinatal period and to develop strategies for linking the public and private sectors, especially for the underserved areas, and to redesignate tertiary care facilities which provide highly specialized medical treatment services and to establish a set of perinatal facilities per 2,000 deliveries within a treatment zone

There is a significant lack of experts who can counsel the youths and prostitutes and the related counselling facilities are unsatisfactory. More experts are needed to counsel these target women in order to prevent teenage pregnancy and infection. The program should teach adolescents about the reproductive system, sexually transmitted diseases including HIV/AIDS, and measures to control fertility. To

enhance the effectiveness and efficiency of the health education system, the Ministry of Health and Welfare established a health education material development center that collects and publishes available information and develops education materials.

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