

# Trends in Birth Order in Korea : 1975~1984

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## I . Introduction

After Korean war (1950), population in Korea has continuously increased because of immigration from North Korea during the Korean war, baby boom and introducing advanced medical techniques of developed countries. That is, the crude birth rate for 1950-55 was estimated as 40 per 1000 population but, during 1955-60, the crude birth rate was estimated as 45 per 1000 population. Only during this 5 years, the crude birth rate increased by 5 points per 1000 population. Such rapid population growth became a serious social problems and curbed a socio-economic development in Korea.

As the Korea government wanted to improve its poor socio-economic situation after Korean war, the government took an interest in its population problems and adopted a population control policy-that is, the national family planning programme-in 1962. The successive national family planning programme has resulted in a very significant decline in fertility in a short period of time and has contributed to a socio-economic development. That is, as is shown in table 1, population growth rate has declined from 2.21 in 1970 to 1.25 in 1985 and crude birth rate also has declined from 29.3 per 1000 population to 19.7 per 1000 population during past 15 years.

While, during the same past period, family planning practice rate gradually has increased from 24% to 70.4% and per capita GNP also continuously has increased from \$248 to \$2047. Educational level also has improved between 1966 and 1980. As is shown in table 2, average

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years of educational attainment was 5.03 years in 1966, 5.74 years in 1970, 6.62 years in 1975 and 7.61 years in 1980 respectively. Especially, average years of educational attainment of female was 3.97 years in 1966 but that of female was 6.63 years in 1980. Between 1966

**Table 1. Trend of Population Growth Rate, Crude Birth Rate, Family Planning Practice Rate and Per Capita GNP**

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Population Growth Rate	2.21	1.99	1.89	1.78	1.73	1.70	1.61	1.57	1.53	1.53	1.57	1.56	1.53	1.46	1.34	1.25
Crude Birth Rate	-	29.3	28.2	27.1	25.3	24.6	24.0	23.6	23.4	23.5	23.4	23.0	22.5	21.7	20.6	19.7
Family Planning Practice Rate	24.0	25.0	30.0	36.0	39.0	40.0	43.0	45.0	49.0	55.0	55.0	-	58.0	60.0	70.0	70.4
Per Capita GNP(Unit \$)	248	285	316	396	535	591	800	1028	1406	1662	1589	1719	1773	1914	2044	2047

Source : Economic Planning Board, *Social Indicators in Korea*, 1986, p.53, p.54, p.77, p.271.

**Table 2. Average Years of Educational Attainment by Sex and Age Group**

	6~19 Years Old	20~29 Years Old	30~39 Years Old	40~49 Years Old	50 Years Old and Over	Average
1966	4.98	7.44	6.15	3.90	1.52	5.03
Male	5.25	8.48	7.90	5.43	7.46	6.19
Female	4.75	6.40	4.49	2.40	0.74	3.97
1970	5.33	8.32	7.15	4.83	1.98	5.74
Male	5.47	8.81	8.65	6.42	3.06	6.86
Female	5.21	7.48	5.64	3.36	1.09	4.72
1975	6.16	8.83	8.12	6.26	2.74	6.62
Male	6.26	9.25	9.33	7.90	4.02	7.61
Female	6.08	8.41	6.88	4.75	1.72	5.70
1980	6.53	9.88	9.17	7.52	4.16	7.61
Male	6.60	10.33	10.19	9.01	5.03	8.67
Female	6.10	9.44	8.10	5.95	2.25	6.63

Note : Average Years of Educational Attainment =

$$\frac{\text{Cumulative Years of Education Received to Total Population}}{\text{Population 6 Years Old and Over} - \text{Total Students}}$$

Source : Economic Planning Board, *Social Indicators in Korea*, 1986, p.174.

and 1980, average years of educational attainment of female has increased by about 2.66 years.

Like above mentioned, Korea has experienced rapid modernization and industrialization during past two or three decades resulting in fertility decline and economic development plan of Korea government. And social structure also rapidly has changed during the same past period.

## **II . Objectives**

Under above mentioned background, it is likely that some changes in the birth order of new born children have taken place during past two or three decades. So, I want to find out the followings ;

- (a) To grasp the reduction in number of birth during 1975~1984.
- (b) To grasp the changes in the birth order distribution by age of mother and place of residence during 1975~1984.

## **III . Source of Data and Methodology**

- a) Source of data : In the volume of 1985 vital statistics based on vital registration, information on birth order of each birth registered is available from 1975 to 1984. Such information on birth order is crossclassified with sex of the birth, age of mother and place of residence. In Korea, the quality of vital registration data are quite good as more than 90 per cent of the vital events are registered.<sup>1)</sup>
- b) Methodology : The trends of birth order during 1975~1984 have been studied with the help of ; Simple percentage distribution of births by birth order and average order of birth.

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1) United Nations, *Demographic Yearbook*, 1985, p. 292.

## IV. Results

Trend in distribution of birth order is analyzed in the following ways :

- a) Percentage distribution of births by birth order and trend of average birth order during 1975 to 1984 is analyzed.
- b) Percentage distribution of births by birth order and place of residence during 1975 to 1984 is analyzed. And average birth order of metropolitan city is compared with that of province.
- c) Percentage distribution of births by age of mother and trend of average birth order by age of mother is analyzed to grasp the difference between various age groups.

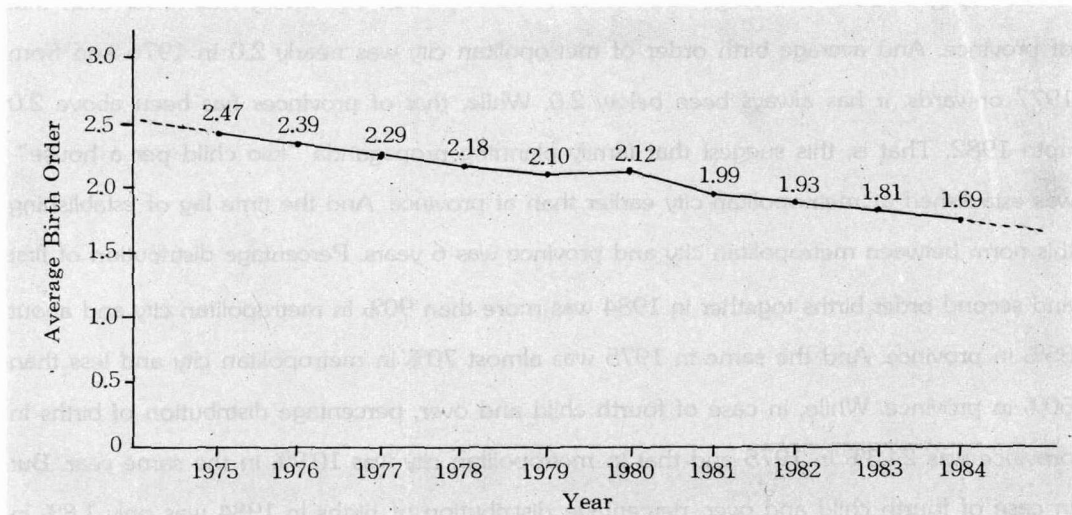
### 1. Percentage Distribution of Births by Birth Order

As is shown in table 3, as a whole, average birth order has continuously declined from 2.47 in 1975 to 1.69 in 1984. During past ten years, average birth order has declined about 0.8 or about 32 per cent. Percentage distribution of births of first and second order accounted for 61.5 per cent in 1975 but has gradually increased during past ten years and percentage

Table 3. Percentage Distribution of Births by Birth Order During 1975~1984

Years	Birth Order						Total	Average	No. of Births
	1st	2nd	3rd	4th	5th and Over	Unknown			
1975	33.9	27.6	17.3	9.4	11.6	0.2	100.0	2.47	848,993
1976	34.4	29.3	17.4	8.8	10.0	0.1	100.0	2.39	776,318
1977	35.8	30.8	17.1	7.9	8.3	0.1	100.0	2.29	807,879
1978	38.0	31.6	16.8	7.1	6.5	—	100.0	2.18	733,493
1979	38.5	33.2	17.1	6.4	4.8	—	100.0	2.10	904,932
1980	39.4	31.5	16.8	6.7	5.6	—	100.0	2.12	874,982
1981	40.9	33.7	16.5	5.5	3.4	—	100.0	1.99	848,164
1982	41.8	35.8	14.8	4.8	2.8	—	100.0	1.93	823,414
1983	44.7	38.6	11.1	3.5	2.1	—	100.0	1.81	736,297
1984	49.4	38.4	8.2	2.5	1.5	—	100.0	1.69	618,938

Figure 1. Trand of Average Birth Order During 1975~1984



distribution of births of first and second order in 1984 was 87.8 per cent. That is, during 1975 to 1984, the percentage distribution of first and second order births has increased by about 43 per cent. The percentage increase was larger in the first order births (46 per cent) compared to the second order births (30 per cent).

Average birth order below 2.0 has been noticed from 1981 and is till continuing. And, in case of third child and over, percentage distribution of births has continuously declined during 1975 to 1984. Especially, in case of fifth child and over, percentage distribution of births has declined very much from 11.6% in 1975 to 1.5% in 1984-decline of 87 per cent.

According to figure 1, average birth order has continuously declined during past ten years. This indirectly suggest that national family planning programme has succeeded during past 10 years.(See table 1)

## 2. Percentage Distribution of Births by Birth Order and Place of Residence

In order to analyze the difference between metropolitan city and province, place of residence is divided by metropolitan city and province. Four largest cities in Korea, namely Seoul, Busan, Daegu, and Incheon are included in "Metropolitan city". Province includes other areas than metropolitan cities, namely, Gyeonggi province, Gangwon province, Chungbuk province, Chungnam province, Jeonbuk province, Jeonnam province, Gyeongbuk province, Gyeongnam province, Jeju island and some other islands.

According to table 4, average birth order of metropolitan city wholly was lower than that of province. And average birth order of metropolitan city was nearly 2.0 in 1976 and from 1977 onwards, it has always been below 2.0. While, that of provinces has been above 2.0 upto 1982. That is, this suggest that family planning propaganda "two child per a house"- was established at metropolitan city earlier than at province. And the time lag of establishing this norm between metropolitan city and province was 6 years. Percentage distribution of first and second order births together in 1984 was more than 90% in metropolitan city and about 85% in province. And the same in 1975 was almost 70% in metropolitan city and less than 60% in province. While, in case of fourth child and over, percentage distribution of births in province was 24.3% in 1975 and that in metropolitan city was 10.9% in the same year. But in case of fourth child and over, percentage distribution of births in 1984 was only 1.8% in metropolitan city and 5.4% in province respectively.

Figure 2 clearly brings out the differences between the metropolitan cities and provinces. The gap of average birth order between metropolitan city and province in 1975 was about

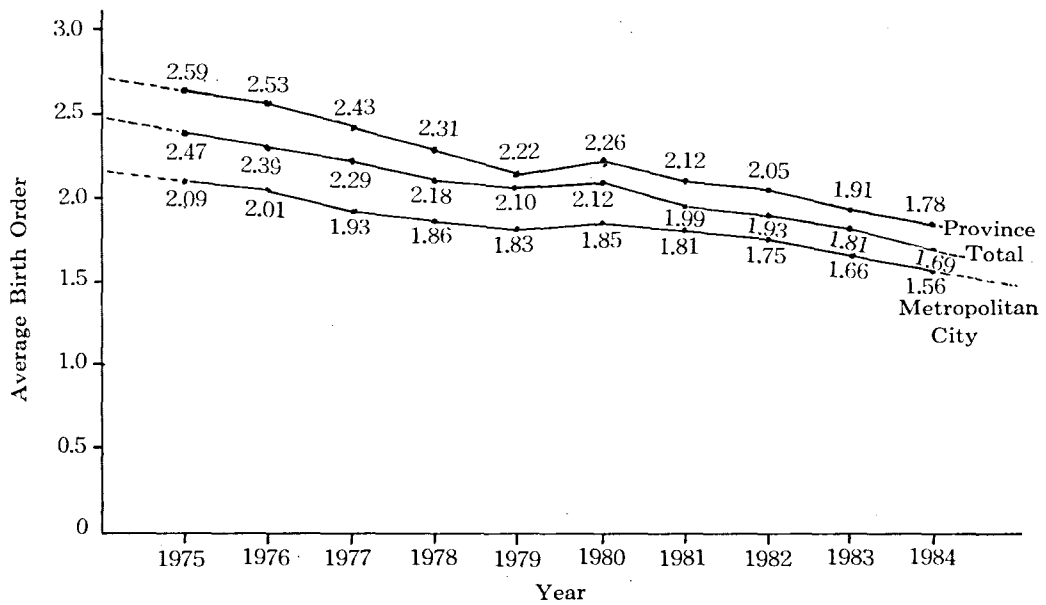
**Table 4. Percentage Distribution of Births by Birth Order and Place of Residence During 1975~1984.**

Years	Metropolitan City							Province						
	1st	2nd	3rd	4th& Over	Unk-nown	Total	Average	1st	2nd	3rd	4th& Over	Unk-nown	Total	Average
1975	37.8	32.9	18.3	10.9	0.1	100.0	2.09	32.7	25.8	16.9	24.3	0.3	100.0	2.59
1976	39.2	35.0	16.9	8.9	-	100.0	2.01	32.8	27.3	17.5	22.2	0.2	100.0	2.53
1977	41.7	35.4	15.4	7.5	-	100.0	1.93	33.6	29.0	17.8	19.5	0.1	100.0	2.43
1978	44.1	35.3	14.3	6.3	-	100.0	1.86	35.4	30.0	17.8	16.6	0.2	100.0	2.31
1979	44.1	36.4	14.3	5.2	-	100.0	1.83	35.9	31.7	18.4	14.0	-	100.0	2.22
1980	44.9	34.9	14.2	6.0	-	100.0	1.85	36.7	29.9	18.1	15.3	-	100.0	2.26
1981	44.5	37.1	13.8	4.6	-	100.0	1.81	38.5	31.4	18.3	11.8	-	100.0	2.12
1982	45.4	39.1	11.8	3.7	-	100.0	1.75	39.4	33.5	16.8	10.3	-	100.0	2.05
1983	48.1	40.8	8.5	2.6	-	100.0	1.66	42.4	37.1	12.9	7.6	-	100.0	1.91
1984	53.5	38.9	5.8	1.8	-	100.0	1.56	46.5	38.1	10.1	5.4	-	100.0	1.78

Note : Metropolitan City - Seoul, Busan, Daegu, Incheon

Province - Gyeonggi, Gangwon, Chungbuk, Chungnam, Jeonbuk, Jeonnam, Gyeongbuk, Gyeongnam, Jeju, and Others.

Figure 2. Trand of Average Birth Order by Place of Residence During 1975~1984.



0.5 but the gap of average birth order between metropolitan city and province has continuously reduced in accordance with the lapse of time, as can be seen vividly in figure 2.

This suggest that, as possession rate of mass-communication facilities has increased in accordance with economic development, the attitude towards the family size of province people has changed. For example, possession rate of television in Korea was 7.4% in 1970 but, in 1980, possession rate of T.V. in Korea was 86.7%. Especially, possession rate of T.V. in rural area was only 0.8% in 1970 but 83.2% in 1980. Only during this ten years, possession rate of T. V. in rural area has increased more than 80%<sup>2)</sup>.

### 3. Percentage Distribution of Births by Birth Order and Age of Mother

The percentage distribution of births by age of mother is shown in table 5. According to table 5, percentage distribution of births of mothers aged 20 to 29 was 67.9% in 1975, 79.9% in 1981 and 86.6% in 1984. That is, percentage distribution of births of mothers aged 20 to 29 has increased about 20.0 counts during past ten years. While, as percentage distribution of births of mothers aged 30 and over was 28.3% in 1975, 17% in 1981 and 10.

2) Economic Planning Board, *Social Indicators in Korea*, 1986, p. 295.

2% in 1984. The same has declined about 18.0 counts during the same period, a decline of about 64 per cent. And percentage distribution of mothers aged 15 to 19 was 3.4% in 1975, 3.0% in 1981 and 3.1% in 1984 respectively. Thus, percentage distribution of births of mothers aged 15 to 19 has remain unchanged during past ten years.

Average age of mothers was 27.1 in 1975 and gradually declined during past ten years. Finally, average age of mothers was 25.3 in 1984. That is, average age of mothers has declined about two years during past ten years. The child-bearing in Korea is mostly confined within age 20 to 29.

**Table 5. Percentage Distribution of Births by Age of Mother During 1975~1984.**

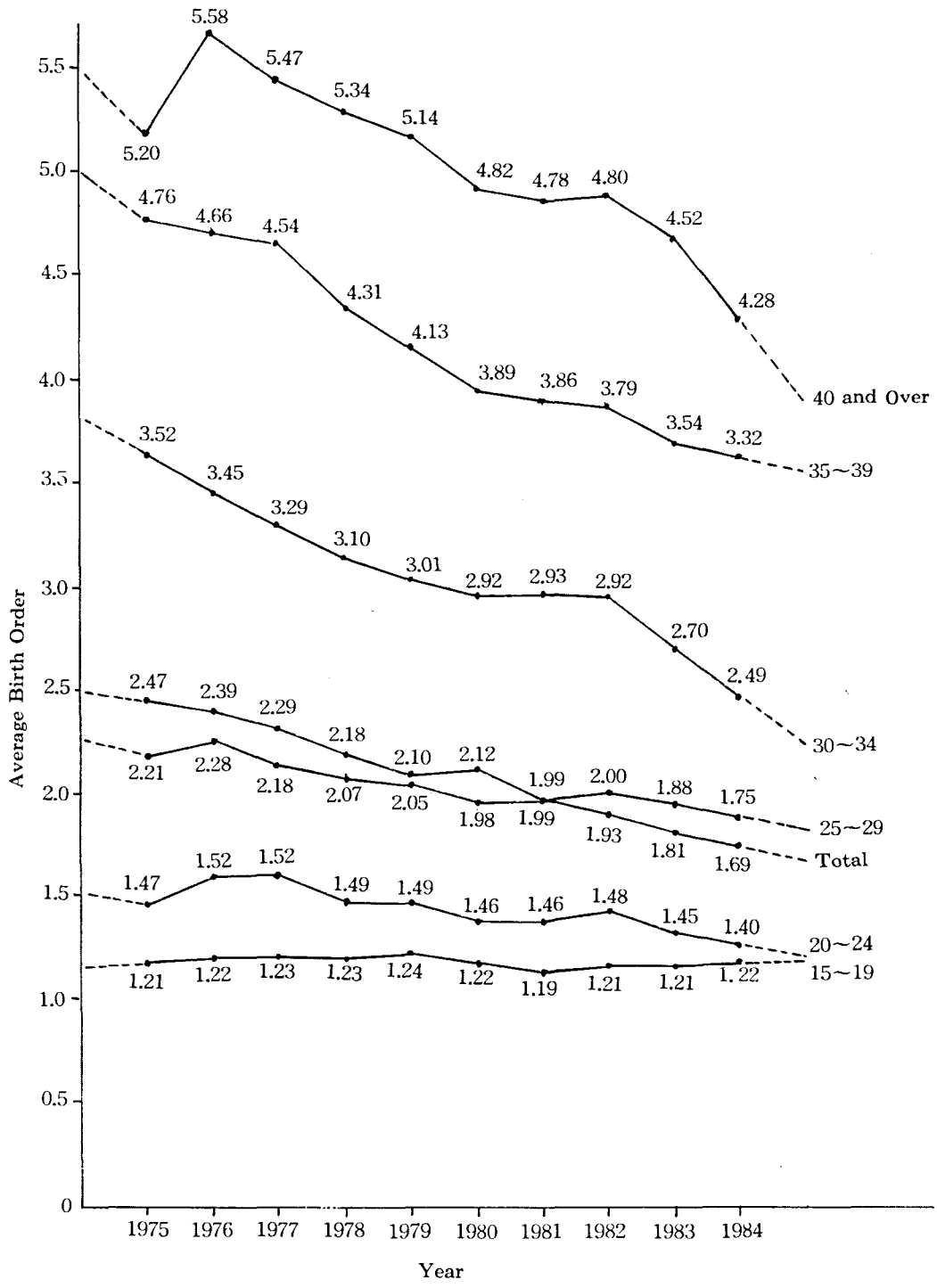
Age of Mother Years	Age of Mother									Total	Average
	15~29	20~24	25~29	30~34	35~39	40~44	45~49	50 and Over	Unk nown		
1975	3.4	30.5	37.4	18.4	7.2	2.2	0.4	0.1	0.4	100.0	27.1
1976	4.0	32.5	38.1	16.3	6.4	2.0	0.4	0.1	0.2	100.0	26.8
1977	4.6	33.7	38.6	15.1	5.8	1.7	0.4	0.1	—	100.0	26.5
1978	4.1	33.2	40.1	15.4	5.3	1.5	0.3	0.1	—	100.0	26.5
1979	3.6	34.5	41.6	14.7	4.2	1.1	0.2	0.1	—	100.0	26.3
1980	3.0	31.5	41.8	15.8	5.1	1.8	0.6	0.1	0.3	100.0	26.7
1981	3.0	35.2	44.7	12.9	3.1	0.8	0.1	0.1	0.1	100.0	26.0
1982	3.5	39.7	42.9	10.7	2.4	0.6	0.1	—	0.1	100.0	25.5
1983	3.2	40.7	44.3	9.3	1.9	0.5	0.1	—	—	100.0	25.4
1984	3.1	40.7	45.9	8.3	1.5	0.3	0.1	—	0.1	100.0	25.3

#### 4. Summary and Conclusion

The average birth order has declined and has declined more in province than in metropolitan city during past ten years. And percentage distribution of births of mothers aged 20 to 29 has increased during past ten years. Average birth order of metropolitan city started below 2.0 in 1977, while that of povince started below 2.0 in 1983. This means that national family planning propaganda - two child per a house - has been firmly established during past ten



Figure 3. Trand of Average Birth Order by Age of Mother During 1975~1984.



years. Rapid economic development and increasing possession rate of mass-communication facilities have contributed to the decline of fertility level between 1975 and 1984. (See table 1)

According to above results, if economic level continuously rises and the attitude of fertility behaviour continuously sustain like past ten years, we can infer that fertility level in the future also continuously will decline and population growth rate also will arrive at zero point in the close future. And Korea population structure will also stabilize and will be approaching to the population structure of a developed countries.

### References

- Arthur A. Compbell, *Manual of Fertility Analysis*, Churchill Livingstone Edinburgh London Melbourne and New York, 1983.
- Economic Planning Board, *Social Indicators in Korea*, National Bureau of Statistics Economic Planning Board, Republic of Korea, 1986.
- Henry S. Shryock, *The Methods and Materials of Demography*, Bowling Green University, Bowling Green Ohio, Academic Press, INC. 1976.
- Jacques Henripin, *Trends and Factors of Fertility in Canada*, Census Monograph Statistics Canada, 1961.
- Kwon, Tai-Hwan, et al., *The Population of Korea*, The Population and Development Studies Center, Seoul National University, 1975.
- Korean Institute for Family Planning, *Statistics on Population and Family Planning in Korea*, Vol. 1, 1978.
- United Nations, *Socio-Economic Development and Fertility Decline in Costa Rica*, United Nations New York, 1985.

## 韓國에 있어서의 出生順位の 變化 : 1975~1984

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本 研究는 지난 1975년부터 1984년까지 申告된 出生順位에 따른 出生兒數의 變化 趨勢를 分析한 것이다.

分析에 活用된 資料는 “1985年 人口動態 申告”로써, 分析은 다음과 같은 事項들이 다. 첫째, 1975년부터 1984년까지 出生順位에 따른 出生兒들의 百分率과 平均出生順位の 變化趨勢를 살펴보았다. 둘째, 1975년부터 1984년까지 地域別 出生順位에 따른 出生兒들의 百分率과 平均出生順位の 變化趨勢를 地域別로 比較 分析하였다. 셋째, 1975년부터 1984년까지 母의 年齡別 出生順位에 따른 出生兒들의 百分率과 平均出生順位の 變化趨勢를 比較 分析하였다.

研究結果를 보면, 1975년부터 1984年 사이에 平均出生順位는 繼續해서 떨어져왔으며, 大都市의 平均出生順位는 他 市·道의 그것보다 繼續 낮은 水準을 維持해 왔으나 兩地域의 平均出生順位 差異는 時間이 經過함에 따라 차츰 좁혀지는 傾向을 보여왔다.

그리고 母의 年齡別로 分析해 보았을때, 母의 年齡이 15歲에서 24歲까지에 속하는 集團은 지난 10年間(1975~1984) 平均出生順位가 큰 變化없이 繼續해서 비슷한 樣相을 보였으나, 母의 年齡이 30歲이상에 속하는 集團에서는 같은 期間동안에 平均出生順位가 繼續해서 떨어지는 樣相을 보였다.

지난 10年間 出生順位에 따른 出生兒數의 百分率을 보면 첫째아와 둘째아로 繼續해서 集中되는 樣相을 보였으며, 出生兒들의 대부분이 母의 年齡이 20歲에서 29歲에 속하는 集團으로 集中되어 일어나고 있는 樣相을 보였다.

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