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Objective: South Korea has faced future population decline because of the continuous decrease in the birth rate. It coupled with increased life expectancy will accelerate population aging and decrease the size of the working-age population over time. This study aimed to investigate the trends and estimates from some indicators by reviewing population changes and birth rates from data available from Statistics Korea.

Methods: We analyzed the results from 1980 to 2019 based on actual data reports and those from 2020 to 2060 based on model estimates using Korean Statistical Information Service and Statistics Korea.

Results: After 2020, the population is expected to increase to 51,942 thousand persons by 2028 and will begin to decline to 51,940 thousand persons by 2029, 49,574 thousand persons by 2045, and 42,838 thousand persons by 2060, thereafter remaining below 50,000 thousand persons. According to the middle-level scenario about crude birth rate (CBR), estimated CBR will be 5.8 in 2022, the lowest level, and will increase insignificantly to 6.0 by 2023 and 6.3 by 2035. It will begin declining again, falling back to 5.8 by 2040 and 5.0 by 2050.

Conclusion: These analyses will help establish public-health policies for newborns and children in Korea over the next 40 years.

Key Words: Population, Birth rate, Child, Statistics, Republic of Korea

Introduction

Korean society is facing future population decline because of the continuous decrease in the birth rate. The total fertility rate (TFR) for Korean women of childbearing age (15 to 49 years) dropped from 6.16 in 1960 down to 4.53 in 1970 and 2.82 in 1980. In 1983, TFR was 2.06, below the replacement level required to maintain a stable population (2.1), and Korea officially became a low birth rate society in 1984 when the TFR fell to 1.76.1 TFR subsequently fell to an ultra-low of <1.3 and broadly stabilized from 2001 to 2015, but it fell again to 0.98 in 2018 and then down to 0.92 in 2019 after a brief recent high of 1.17 in 2016 and 1.05 in 2017. Also, the crude birth rate (CBR) reached a new low of 5.9 in 2019, down from the previous year’s 6.4. The CBR was 22.6 in 1980, 15.2 in 1990, and 13.5 in 2000, and then rapidly dropped to 8.6 in 2015.1,4 Korea recorded the lowest birth rate at 1.05 in 2017 among Organisation for Economic Co-operation and Development (OECD) member countries whose average was at 1.65.3,5

Accordingly, the number of births per year has dropped from 1,006.6 thousand persons in 1970 to 862.8 thousand persons in 1980, 649.7 thousand persons in 1990, 640.0 thousand persons in 2000, 470.2 thousand persons in 2010, 436.5 thousand persons in 2015, 357.8
thousand persons in 2017, 326.8 thousand persons in 2018, and to 303.1 thousand persons in 2019. The number of births per year is expected to decrease to 300.0 thousand persons in 2020.3

Korea’s ultra–low birth rate coupled with increased life expectancy will accelerate population aging and decrease the size of the working–age population over time.5

Among several country–level health indicators, the main factors related to newborns and children for guiding long–term public–health policy are birth measures (total population, population growth rate [PGR], TFR, CBR, and number of births) and death measures (perinatal mortality rate and neonatal mortality rate, and infant mortality rate).

This article evaluates the trends and estimates from the above indicators by reviewing population changes and birth rates from data available from Statistics Korea. These analyses will help establish public–health policies for newborns and children in Korea over the next 40 years. Results from 1980 to 2019 are based on actual data reports and those from 2020 to 2060 are based on model estimates.

Methods

1. Data collection

Population level data obtained for this study include current Korean population data, the PGR over the past 40 years,2,6 and official estimates of PGR for the next 40 years.2,8,9 Fertility and birth data obtained include the TFR, CBR, and the number of births in the past 40 years1,2,4 and official estimates for these variables for the next 40 years.6,8 All data were acquired from the national statistical database, the Korean Statistical Information Service (http://kosis.kr/index/index.do), which is operated by Statistics Korea.

Data from the 3rd Basic Plan for Low–Fertility Aging Societies in Korea (2016–2020, Bridge Plan 2020)10,11 were consulted for data on government plans to confront those problems.

This study protocol was reviewed and approved by the Institutional Review Board of Kyung Hee University College of Medicine (approval no. KHNMC 2020–07–032).

2. Analyzes

Estimates for several health indicators over the next 40 years were categorized as low, middle, or high based on 3 variables: CBR, life expectancy, and international migration patterns. We used data from the middle levels for basic scenarios. To reflect future uncertainty, the future levels of the population change factors (birth, death, and international migration) were set at the middle, high, and low levels, and then a total of 30 special projection scenarios for the future population were prepared by combining the levels of each factor. A total of 27 scenarios (3 births×3 deaths×3 international) were prepared by combining all assumptions for each demographic factor. The basic scenario is a median estimate that combines the median assumptions for each demographic change factor, a high estimate that combines high–ranking households (maximum population estimate), and a low–level estimate that combines low–level assumptions (minimum population estimate).

For long–term fertility estimates after 10 years, the completed fertility rate of the target cohort was predicted using a time series model. For example, the completed fertility rate of the target cohort born in 2002 (the cohort who entered the fertile age of 15 years in 2017) was predicted using a time series model based on the completed fertility rate of those born between 1945 and 1983. The distribution of fertility rates by age in the target cohort was calculated using a generalized log–gamma model, the fertility rates by age of the final cohort (born in 1983) and the target cohort (born in 2002) were exponentially interpolated, and the fertility rate by age of the cohort was converted into fertility rates by period and age.

The future population of the population estimate is calculated in a way that calculates the population for the next year by applying the demographic balancing equation that adds birth and net international migration to the base population as of July 1, 2017, the starting point of the estimate, and subtracts death.

3. Definition of terms

Population estimates were based on the population of Korea as of July 1 for each year. PGR is the annual growth rate of the population over a given time period. TFR is the average number of children that would be born to a woman over her lifetime if the woman were to experience the current age–specific fertility rates throughout her lifetime. CBR is the total number of live
births among the population of a given geographical area during a given year per 1,000 mid-year total population of the given geographical area during the same year. Aging society, aged society, and super-aged society are terms for a society having 7%, 14%, and 20% of its population in the “≥65-year group, respectively, according to the United Nations (UN) standards.

Results

1. Reported and estimated statistics of total population and PGR in South Korea\(^6,9\)

Reported and estimated statistics of past (1980–2018) and future (2020–2060) total population size and the PGR in South Korea are shown in Table 1.\(^1\)

Reported total population numbers for the past 4 decades were: 38,124 thousand persons in 1980, 42,869 thousand persons in 1990, 47,008 thousand persons in 2000, 49,554 thousand persons in 2010, and 51,607 thousand persons in 2018, showing a continuously increasing trend. According to a middle–level scenario of population growth, in the coming 4 decades, the total population is estimated to be 51,781 thousand persons in 2020, 51,927 thousand persons in 2030, 50,855 thousand persons in 2040, 47,745 thousand persons in 2050, and 42,838 thousand persons in 2060. After 2020, the population is expected to increase to 51,942 thousand persons by 2028 and will begin to decline to 51,940 thousand persons by 2029, 49,574 thousand persons by 2045, and 42,838 thousand persons by 2060, thereafter remaining below 50,000 thousand persons.

Reported and estimated statistics for total population and PGR in South Korea in the past (1980–2018) and future (2020–2060) are presented in Table 1.\(^1\) PGR decreased continuously from 1.56 in 1980 to 0.48 in 2018. According to the middle–level scenario, the PGR is expected to decline steadily to 0.14 in 2020, 0.02 in 2028, -0.00 in 2029, and -0.03 in 2030, at which point population growth will become negative and will continue to

| Year | Reported statistics | Estimated statistics |
|------|---------------------|----------------------|
|      | Total population \((\times1,000)\) | Population growth rate | Middle level | High level | Low level | Middle level | High level | Low level |
| 1980 | 38,124              | 1.56                 |               |           |          |           |           |          |
| 1985 | 40,806              | 0.98                 |               |           |          |           |           |          |
| 1990 | 42,869              | 0.99                 |               |           |          |           |           |          |
| 1995 | 45,093              | 1.01                 |               |           |          |           |           |          |
| 2000 | 47,008              | 0.84                 |               |           |          |           |           |          |
| 2005 | 48,185              | 0.21                 |               |           |          |           |           |          |
| 2010 | 49,554              | 0.50                 |               |           |          |           |           |          |
| 2015 | 51,015              | 0.53                 |               |           |          |           |           |          |
| 2016 | 51,218              | 0.40                 |               |           |          |           |           |          |
| 2017 | 51,362              | 0.28                 |               |           |          |           |           |          |
| 2018 | 51,607              | 0.48                 |               |           |          |           |           |          |
| 2020 | 51,781              | 51,935               | 51,644        | 0.14      | 0.31     | -0.02     |           |          |
| 2025 | 51,905              | 52,723               | 51,230        | 0.03      | 0.29     | -0.20     |           |          |
| 2030 | 51,927              | 53,414               | 50,654        | -0.03     | 0.22     | -0.27     |           |          |
| 2035 | 51,630              | 53,742               | 49,712        | -0.18     | 0.05     | -0.45     |           |          |
| 2040 | 50,855              | 53,554               | 48,307        | -0.38     | -0.14    | -0.66     |           |          |
| 2045 | 49,574              | 52,856               | 46,403        | -0.60     | -0.35    | -0.90     |           |          |
| 2050 | 47,745              | 51,606               | 44,011        | -0.86     | -0.56    | -1.17     |           |          |
| 2055 | 45,406              | 49,924               | 41,155        | -1.09     | -0.72    | -1.45     |           |          |
| 2060 | 42,838              | 48,079               | 38,013        | -1.20     | -0.77    | -1.66     |           |          |
Perinatology

2018, and 5.9 in 2019, showing a dramatically decreasing trend. According to the middle-level scenario, estimated CBR will be 5.8 in 2022, the lowest level, and will increase insignificantly to 6.0 by 2023 and 6.3 by 2035. It will begin declining again, falling back to 5.8 by 2040 and 5.0 by 2050.

Historical changes and estimates of future changes for total number of births are particularly important. There were 862.8 thousand persons born in 1980, 649.7 thousand persons in 1990, 640.0 thousand persons in 2000, 470.7 thousand persons in 2010, 406.2 thousand persons in 2016, 357.7 thousand persons in 2017, and 303.1 thousand persons in 2019. By 2016, birth numbers decreased by half over about 35 years and, since 2017, the number of births has remained below 400 thousand persons, with a marked decrease to 300 thousand persons in 2019. In the coming 4 decades, estimates of the total number of births are 292 thousand persons in 2020, 290 thousand persons in 2025, 288 thousand persons in 2030, and 285 thousand persons in 2035. It will begin declining again, falling back to 282 thousand persons in 2040 and 278 thousand persons in 2050.

Table 2. Reported and Estimated Statistics of Past (1980-2018) and Future (2020-2060) Total Fertility Rate, Crude Birth Rate, and Total Births Number in South Korea

| Year | Reported statistics | Estimated statistics |
|------|---------------------|---------------------|
|      | Total fertility rate| Crude birth rate    | Total births (n) | Total fertility rate| Crude birth rate | Total births (n) | Total fertility rate| Crude birth rate | Total births (n) |
|      | Middle level | High level | Low level | Middle level | High level | Low level | Middle level | High level | Low level |
| 1980 | 2.82     | 22.6     | 862.8   | 0.90     | 1.06     | 0.81     | 5.6     | 6.9     | 5.1     | 292     | 357     | 263     |
| 1985 | 1.66     | 16.1     | 655.5   | 1.00     | 1.23     | 0.84     | 6.5     | 7.8     | 5.5     | 335     | 409     | 280     |
| 1990 | 1.57     | 15.2     | 649.7   | 1.14     | 1.38     | 0.97     | 6.9     | 7.9     | 6.0     | 358     | 423     | 302     |
| 1995 | 1.63     | 15.7     | 715.0   | 1.22     | 1.44     | 1.03     | 6.3     | 7.0     | 5.5     | 327     | 379     | 275     |
| 2000 | 1.48     | 13.5     | 640.0   | 1.27     | 1.45     | 1.09     | 5.8     | 6.4     | 5.0     | 295     | 344     | 244     |
| 2005 | 1.09     | 9.0      | 438.7   | 1.27     | 1.45     | 1.10     | 5.5     | 6.1     | 4.9     | 275     | 322     | 225     |
| 2010 | 1.23     | 9.4      | 470.2   | 1.27     | 1.45     | 1.10     | 5.0     | 5.8     | 4.4     | 240     | 297     | 193     |
| 2015 | 1.24     | 8.6      | 438.4   | 1.27     | 1.45     | 1.10     | 4.6     | 6.0     | 3.6     | 210     | 299     | 150     |
| 2016 | 1.17     | 7.9      | 406.2   | 1.27     | 1.45     | 1.10     | 5.0     | 6.5     | 3.6     | 214     | 310     | 138     |
in 2021 (the lowest total), 358 thousand persons in 2030, and then a steady decrease to 354 thousand persons in 2031, 295 thousand persons in 2040, 240 thousand persons in 2050, and 214 thousand persons in 2060.

3. Reported and estimated statistics for age distribution in Korea, particularly children

Reported and estimated statistics for age distribution among the total population of South Korea in the past (1980–2018) and future (2020–2060) are shown in Table 3. The population was divided into 3 age categories: ≤14, 15 to 64, and ≥65 years. We focused on the portion of the total South Korean population who are children (aged ≤14 years).

In past 4 decades, the proportion of children among the total population decreased continuously to 34.0% in 1980, 25.6% in 1990, 21.1% in 2000, 16.1% in 2010, and 12.8% in 2018. Future estimates from the middle-level scenario suggest a decline from 12.2% by 2020 to 9.6% by 2030, 9.8% by 2040, 8.9% by 2050, and 8.0% by 2060.

4. Population pyramid for Korea

The population pyramid for Korea was constructed using both estimated population data from 1980 and 2000 and projected population data from 2020, 2040, and 2060 (Fig. 1).

The demographic structure of Korea has changed from a pyramid shape in the 1960s, to a bell in the 1980s, and to a barrel in the 2000s, at which the portion of the population >65 years was 7.2%, reaching the definition of an aging society. The percentage of elderly in the population was 14.3% in 2018, marking an aged society, and is expected to be 20.1% in 2025, at which point Korea will be a super-aged society. By 2060, the Korean population structure is expected to be an inverted pyramid.

The comparisons of expected total population, age distribution, and TFR between South and North Korea are shown in Table 4. The total population of South and North Korea is projected to

### Table 3. Reported and Estimated Statistics of Past (1980-2018) and Future (2020-2060) Age Distribution among Total Population in South Korea

| Year | 0-14 yr | 15-64 yr | ≥65 yr | 0-14 yr | ≥65 yr | 15-64 yr |
|------|---------|----------|--------|---------|--------|----------|
|      | Middle level | High level | Low level | Middle level | High level | Low level |
| 1980 | 34.0     | 62.2     | 3.8    | 12.2     | 12.2   | 12.1     |
| 1985 | 30.2     | 65.6     | 4.3    | 10.7     | 11.3   | 8.6      |
| 1990 | 25.6     | 69.3     | 5.1    | 9.6      | 10.8   | 7.6      |
| 1995 | 23.4     | 70.7     | 5.9    | 9.6      | 11.1   | 7.3      |
| 2000 | 21.1     | 71.7     | 7.2    | 9.4      | 10.4   | 6.3      |
| 2005 | 19.1     | 71.9     | 9.0    | 8.9      | 9.7    | 9.6      |
| 2010 | 16.1     | 73.1     | 10.8   | 8.4      | 9.4    | 6.4      |
| 2015 | 13.8     | 73.4     | 12.8   | 8.0      | 9.4    | 6.7      |
| 2016 | 13.4     | 73.4     | 13.2   | 8.0      | 9.4    | 6.7      |
| 2017 | 13.1     | 73.2     | 13.8   | 8.0      | 9.4    | 6.7      |
| 2018 | 12.8     | 72.9     | 14.3   | 8.0      | 9.4    | 6.7      |
| 2020 |         |          |        | 12.2     | 12.2   | 12.1     |
| 2025 |         |          |        | 10.7     | 11.3   | 10.2     |
| 2030 |         |          |        | 9.6      | 10.8   | 8.7      |
| 2035 |         |          |        | 9.6      | 11.1   | 8.3      |
| 2040 |         |          |        | 9.8      | 11.0   | 8.6      |
| 2045 |         |          |        | 9.4      | 10.4   | 8.3      |
| 2050 |         |          |        | 8.9      | 9.7    | 7.9      |
| 2055 |         |          |        | 8.4      | 9.4    | 7.4      |
| 2060 |         |          |        | 8.0      | 9.4    | 6.8      |
be 77,375 thousand persons in 2019, 77,713 thousand persons in 2040, and 64,820 thousand persons in 2067. The percentage of the youth population in South and North Korea is expected to be 14.9% in 2019, 12.5% in 2040, and 11.1% in 2067. The TFR for South and North Korea was 4.21 and 4.00, respectively, in 1970–1975, and 1.11 and 1.91, respectively, in 2015–2020 (Table 4).<ref>

Discussion

According to the middle-level PGR scenario, the total population is projected to rise from 51,362 thousand persons in 2017, up to a peak of 51,942 thousand persons in 2028, and then drop to 39,290 thousand persons by 2067, reaching the same population size as 1982. According to the high-level scenario, the total population is projected to reach a peak of 53,750 thousand persons in 2036, and then drop to 45,470 thousand persons by 2067, reaching the same population size as 1996. According to the low-level scenario, the total population is projected to reach the earliest peak of 51,650 thousand persons in 2019, and then drop to 33,650 thousand persons by 2067, reaching the same population size as 1972. In summary, the total population is expected to peak at 51,942 thousand persons in 2028 under the middle-level scenario (Fig. 2), peak earlier (2019) under the low-level scenario, and peak later (2036) under the high-level scenario.

Fig. 1. Population pyramid for Korea. The population structure for Korea was a pyramid in the 1960s, a bell in the 1980s, and a barrel in the 2000s, at which the portion of the population over 65 years was 7.2%, entering an aging society. The percentage of elderly population was 14.3% in 2018, entering an aged society, and 20.1% in 2025, entering a super-aged society. By 2060, an inverted pyramid is expected.
The PGR will shift to negative by 2029 when the total population starts to decrease (Fig. 2), and it will reach ~1.26% by 2067. According to the high-level scenario, PGR will reach negative growth by 2037, and be ~0.83% by 2067. According to the low-level scenario, PGR will reach negative growth by 2020, and the decline in PGR will be more precipitous at ~1.79% by 2067.

The natural increase in the population is the difference between the numbers of births and deaths in a population. A natural decrease, or population decline, is anticipated from as soon as 2019, once the number of deaths exceeds the number of births according to the low-level scenario. Natural decrease would begin in 2032 under the high-level scenario.

As fertility declines and life-expectancy increases, the population pyramid is expected to be fully inverted by 2030. Indeed, the percentage of elderly people in the population was 14.3% in 2018, indicating an aged society, and could reach 20.1% by 2025, becoming a super-aged society. By these estimates, South Korea will transition from an aged to a super-aged society (7 years) much more rapidly than it transitioned from an aging to an aged society (18 years).

In Korea, the TFR has not recovered since it decreased from 6.16 in 1960 to below 2.06 in 1983, which is just below the population-replacement level. TFR continued to fluctuate from below 1.3 since 2001, but decreased to 0.98, in 2018. Korea became a low birth rate society with a TFR of 1.76 in 1984.
In addition to the prolonged decline in the birth rate toward an ultra-low rate, accelerated population aging and the decreased distribution of the workforce are emergent social and national problems in Korea. The government placed the issue of low birth rate and population aging on the national agenda in 2004, established the Basic Act on the Low Birth Rate and Aged Society, and then launched the Low Birth and Aged Society Committee in 2005. Despite enactment of the 1st to 3rd Basic Plan for Low-Fertility Aging Societies (2006–2010, 2011–2015, and 2015–2020), the ultra-low birth rate continues (Fig. 4).7,10,12,13

The number of births is expected to drop from 357.7 thousand persons in 2017 to 292 thousand persons in 2020, and then down to 210 thousand persons in 2067. Under the high-level scenario, the number of births is expected to be 290 thousand persons in 2067. In the low-level scenario, the number is expected to be 140 thousand persons.8

The age structure of the population is predicted to change from 2017 to 2067 as follows: Population composition for working-age people, 15 to 64 years, is projected to decrease from 73.2% to 45.4%, while the elderly population, 65 years or more, is projected to increase from 13.8% to 46.5%. The youth population, 0 to 14 years, is projected to decrease from a range of 5,790 thousand persons (10.8%, maximum) to 4,430 thousand persons (8.7%, minimum) in 2030 to a potential range of 4,540 thousand persons (10.0%, maximum) to 2,130 thousand persons (6.3%, minimum) in 2067. Beginning in 2020, when the baby boomers born between 1955 and 1963 shift from being a working-age population to an elderly population, fluctuation of the population composition by age group is expected to increase, including a rapid decline in the working-age population and a rapid growth in the elderly population. Since 2017, the elderly population has been larger than the youth population.
population, and by 2067, the elderly population is expected to be 5.7 times larger than the young population (4.4 times higher under the high-level scenario and 7.9 times higher under the low-level scenario).8

The school-age population, 6 to 21 years, is expected to decrease from 8,460 thousand persons in 2017 to 1,900 thousand persons over the next 10 years (1,750 thousand persons under the high-level scenario, and 2,010 thousand persons under the low-level scenario). The elementary–school–age population, 6 to 11 years, was 2,720 thousand persons in 2017 and is expected to drop to 1,800 thousand persons by 2030, which is 66% of the 2017 population. The middle–school–age population, 12 to 14 years, was 1,380 thousand persons in 2017 and is expected to drop to 1,140 thousand persons by 2030, which is 83% of the 2017 population. The high-school–age population, 15 to 17 years, was 1,720 thousand persons in 2017 and is expected to drop to 1,320 thousand persons by 2030, which is 77% of the 2017 population. The college–age–population, 18 to 21 years, was 2,640 thousand persons in 2017 and is expected to be 1,810 thousand persons by 2030, which is 69% of the 2017 population.

The population of 18-year–old college–eligible people is expected to decrease from 610 thousand persons in 2017 to 460 thousand persons by 2030, a 76% reduction.

We compared the expected total population, age distribution, and TFR between South and North Korea. There are opinions that the unification of South and North Korea is necessary to overcome the low birth rate. The population replacement fertility rate, which is the TFR required for one generation to be replaced by the next, is known to be around 2.1 in most countries, although it may fluctuate depending on the mortality rate. Since the recent TFR in both South and North Korea is less than 2.1, even if unification is achieved, the problems of low fertility and aging may not be resolved, and may even get worse.

Several conclusions can be drawn from our results. The total population will increase incrementally until 2028, but will decrease thereafter. Accordingly, PGR will also become negative by 2029. The natural decrease begins in 2019, when the number of deaths became greater than the number of births. The percentage of the youth population will also decrease significantly, and TFR and CBR will continue to decline followed...
by an increase in 2035. The population pyramid will gradually change into an inverted or triangular structure that widens around the over 60-year age group. In the 1st and 2nd Basic Plan for Low–Fertility Aging Societies, the government set national policy to strengthen a sense of national responsibility for childbirth, which included national childcare programs, increasing maternity support, and expanding the work–family balance system. The 3rd Basic Plan for Low–Fertility Aging Societies brought a paradigm shift in its response to the low birth rate and aging population with the aim of achieving TFR of 1.5 by 2020. The focus was a happy child–centered society, a 39% reduction in the elderly poverty rate by 2020, and encouragement of a productive and lively aging society, with the broader aim of creating a society where Koreans took care of one another and worked together, so that people experienced a happy old age that was created communally and could actively prepare for population changes anticipated since February 2019. The 4th Basic Plan for Low–Fertility Aging Societies (2021–2025) has not yet been announced and will be based on revisions of the 3rd plan, but it aims by 2040 to support the retired generation by creating an environment for a stable and equal life, guarantee life for all generations, and build a social system that actively prepares for population change. Among the 3rd plan revisions from 2019, the contents related to childbirth and children are as follows: (1) Promote a happy child–raising society by minimizing childbirth–support burden, maximizing time with children via parental leave and improved work–life balance, building an accessible high–quality care system that includes infant and primary–school facilities, at–home babysitting, and increased local support. (2) Build a society that is welcoming to everyone regardless of marriage or childbirth status, including support for unmarried child–rearing and single–parent households and establishing a foundation for all births that promotes equality and coexistence of diverse families. (3) A country where a happy life for young women is guaranteed by increasing job opportunities, reducing the unemployment rate, housing support and stability, and better education support.

The 4th Basic Plan for Low–Fertility Aging Societies will be established in 2020, and the plan will be announced between 2021 and 2025. To solve the problems of ultra–low birth rate, decreased number of births, decreasing total population and child–age distribution, we hope that the 4th Basic Plan for Low–Fertility Aging Societies would offer effective solutions through a realistic and reasonable set of policies, recognizing that the past 15 years of policies have not been successful.

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**Conflict of Interest**

No potential conflict of interest relevant to this article was reported.

**Authors’ Contributions**

Conceptualization: JY, CYK, SHS, CWB, YSC, SHC; Methodology: JY, EK, CYK, SHS, CWB; Writing–original draft: JY, EK, CYK, CWB, SHC; Writing–review & editing: SHC.

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