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A Survey on Public Perceptions of Low Fertility: A Social Research Panel Study

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ABSTRACT

Background: It was reported that South Korea showed the greatest decline in the fertility rate among the entire OECD countries over the last 30 years with the total fertility rate (TFR) of 0.84 persons in 2020. Despite the efforts of the Korean government, the TFR has decreased constantly. This study intended to analyze the perception of Koreans toward pregnancy and childbirth regarding the low fertility rate in South Korea for understanding the causes of constantly decreased low fertility.

Methods: This study carried out an online survey based on 1,002 men and women aged 19 to 59 years old for six days from October 21 to October 26 in 2021 in cooperation with Gallup Korea. This study analyzed the perception of people toward low fertility, the severity of low fertility, and level of interest in low fertility to inspect awareness of the severity of low fertility in South Korea through a survey.

Results: It was found that 62%, 52%, and 72% of entire participants, women, and men agreed on a question “It is better to get married”. As for women’s age, a positive response for this question was derived from 34.2% (20s), 43.1% (30s), 53.4% (40s), and 71.4% (50s), respectively ($P < 0.001$). In a question “the necessity of children”, a positive response for this question was derived from 34.7% (20s), 58.3% (30s), 75.9% (40s), and 83.5% (50s) of female respondents, respectively ($P < 0.001$). Positive responses were shown 39.2%, 60.0%, 79.7%, and 81.5% of female participants in their 20s, 30s, 40s, and 50s agreed on the question “My children make me happy in my life”, respectively ($P < 0.001$).

Conclusion: This study found that a decrease in the TFR was affected mainly by the negative perception of women in their 20s and 30s toward marriage, childbirth, and the necessity of children. Therefore, further research should be conducted to develop policies that focus on these significant variables to overcome the worsening low fertility problem.

Keywords: Low Fertility Rate; National Policy Support; Marriage; Childbirth

INTRODUCTION

Data of Statistics Korea showed that the number of newborns and the total fertility rate (TFR) in 2020 were 272,400 persons and 0.84 persons respectively and that both figures have been the lowest since 1970. The mean maternal age at birth in 2020 was 33.1 years,

Disclosure

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Oh CY, Ahn KH. Data curation: Oh CY, Ahn KH. Formal analysis: Oh CY, Ahn KH. Investigation: Oh CY. Methodology: Kim HS, Oh CY, Ahn KH. Visualization: Kim HS, Ahn KH. Writing - original draft: Kim HS. Writing - review & editing: Oh CY, Ahn KH.

which increased by 0.1 years compared to that in 2019.¹ It was also reported that South Korea showed the greatest decline in the fertility rate among the entire OECD countries over the last 30 years.² The Korean government has recognized the importance of healthy pregnancy and childbirth under these circumstances and implemented policies to raise the low fertility rate and support childbirth at advanced maternal age. The Korean government implemented ‘The Fourth Basic Plan on Low Fertility and Aging Society’ in 2021.³ The Fourth Basic Plan was designed to strengthen support measures according to life cycle stages to transform the current Korean society into the ‘society that works and cares together’. However, despite the implementation of the Fourth Basic Plan since 2021, the fertility rate in South Korea is expected to decrease constantly in the future.

Numerous studies have been conducted to analyze reasons for low fertility and establish policies on solving the low fertility problem based on the reasons. In 2018, the National Assembly Budget Office (NABO) stated that the population of women in their late 20s and early 30s, decreased the fastest among the population of women in their childbearing years (15–49 years). The NABO also reported that a decrease in the TFR was accelerated by an increase in maternal age at first birth and the number of late marriage cases.⁴ A decrease in the marriage rate is the main reason for such a low fertility rate in recent days, and the average number of newborns in married households has decreased as well.

The Korean government has extensively provided policies on low fertility since it implemented ‘The Third Basic Plan on Low Fertility and Aging Society’ in 2016. Despite the efforts of the Korean government, the TFR has decreased constantly. Thus, this study analyzed the perception of Koreans toward pregnancy and childbirth regarding the low fertility rate in South Korea. In this study, a social research panel was applied to derive solutions for low fertility based on the analytic results. Existing basic population data, such as population trend survey data and population housing census data, can be effectively used to primarily observe population-related phenomena and analyze basic population statistics. However, the use of such data is insufficient to examine population change from socio-economic and cultural aspects beyond a demographic range.⁵ We analyzed the change of population structure related to low fertility by investigating complex causal relationships among main mediating factors and variables (e.g., marriage, family composition, education level, economic activities, and social value) related to social change, economic growth, economic change, and cultural and value change.

Therefore, this study investigated socio-economic change and cultural and value change related to low fertility by applying the social research panel and identified essential reasons for low fertility based on the analytic results.

METHODS

Subjects

This study carried out an online survey based on 1,002 men and women aged 19 to 59 years old for six days from October 21 to October 26 in 2021 in cooperation with Gallup Korea. Stratified sampling was performed to proportionally extract samples of regions, gender, and age groups according to the size of layers. Moreover, this study extracted mobile phone users based on random digit dialing from August 2021 and established and operated a survey panel consisting of the extracted users. Accordingly, this study carried out a survey based on the survey panel

by calling them or sending text messages to them. Among the entire 1,429 participants, 1,002 participants responded to the text messages sent to them. Thus, the response completion ratio compared to the number of text messages sent was calculated to be 70%. This online survey was performed based on the panel of those who voluntarily participated in this survey.

Variables

Personal characteristics

This study analyzed personal characteristic variables (e.g., gender, age, occupation, a state of marriage, a perceived household economic status, residential area, the number of children, education level, and religion) which can affect the perception of people toward low fertility. As for occupation, people were classified as follows: workers in agriculture, fishery, and livestock industries, self-employed workers, workers in sales and service industries, technical engineers, workers responsible for general work, office workers and technicians, professional workers, housewives, students, and unemployed people. A state of marriage was classified as single, married, divorced, separated, bereaved. The residential area was classified as Seoul, seven metropolitan cities, and nine provinces (**Supplementary Data 1**).

Perceptions of low fertility rate

This study analyzed the perception of people toward low fertility, the severity of low fertility, and level of interest in low fertility to inspect awareness of the severity of low fertility in South Korea. Prior to the analysis, the survey panel was asked about their opinions on childbirth and childcare. Specifically, participants were asked whether married people need children; whether children make them happy in their lives; whether child rearing requires national support; whether child rearing requires main responsibility and economic power; and whether marriage is essential.

Participants were also asked to select two main reasons for low fertility among the following conditions which were regarded as reasons for low fertility: insecure income caused by unstable jobs and employment, an atmosphere that emphasizes personal life, economic burdens for child rearing, anxiety over child rearing, pressure for providing education for children, excessive housing cost, and women career interruption caused by childbirth and child rearing.⁴ In addition, they received a question about whether national support was satisfactory for childbirth and child rearing. Subsequently, this study investigated their intention to give birth if the Korean government provided them with supportive measures such as an incentive of 100 million won in cash, full-scale governmental childcare service, free housing support, ensured paid leave of absence for three years, free education support for children, and free support for childbirth and medical expenses.

Given the increasing number of late marriages accelerating low fertility, this study asked participants to select the most appropriate answer for themselves among the following specific items to investigate their perception toward marriage and childbirth: I will get married but will not give birth to a child; I am not married but am willing to give birth to a child; I am willing to give birth to more than three children; and I am willing to adopt a child without giving birth to a child by myself.

Data analysis

The clinical variables were compared using Pearson's χ^2 test and the multinomial test. The T&F program version 1.6 (Yoojin BioSoft, Goyang, Korea), and IBM SPSS Statistics for Windows version 23 (IBM Corp., Armonk, NY, USA) were used for all statistical analyses.

Ethics statement

We have a consent by the respondents.

RESULTS

The 1,002 men and women participated in this survey. Regarding gender, 51.3% of the entire participants were men, and 48.7% were women. **Fig. 1** shows the distribution of the entire participants according to specific conditions. In terms of the age group, 24.7% were in their 20s, 21.6% were in their 30s, 26.2% were in their 40s, and 27.4% were in their 50s. As for the state of marriage, 38.9% were single, and 61.1% were married. With regard to the number of children, 44.9% did not have a child, 16% had a child, 32.1% had two children, and 7% had three or more children. A response rate according to a residential area was also presented.

Table 1 shows the responses of participants to questions about reasons for low fertility. As indicated in this table, the statistically significant reasons for low fertility were as follows in order of importance: insecure income caused by unstable jobs and employment (34.9% of the entire participants, 41.0% of men, and 25.5% of women; $P < 0.001$), an atmosphere that emphasizes personal life (18.1% of the entire participants, 15.6% of men, and 20.9% of women; $P = 0.035$), excessive housing cost (10.0% of the entire participants, 13.0% of men, and 6.8% of women; $P = 0.001$), women career interruption caused by childbirth and child rearing (6.6% of the entire participants, 1.5% of men, and 12.0% of women; $P = 0.001$), and lack of confidence in childcare (0.7% of the entire participants, 0% of men, and 1.4% of women; $P = 0.019$).

Table 2 shows the responses of participants to a question “It is better to get married”. It was found that 620 (61.9%) of the entire participants agreed on this question. Regarding gender, 252 (51.6%) of women and 368 (71.7%) of men agreed on it. As for women’s age, a positive

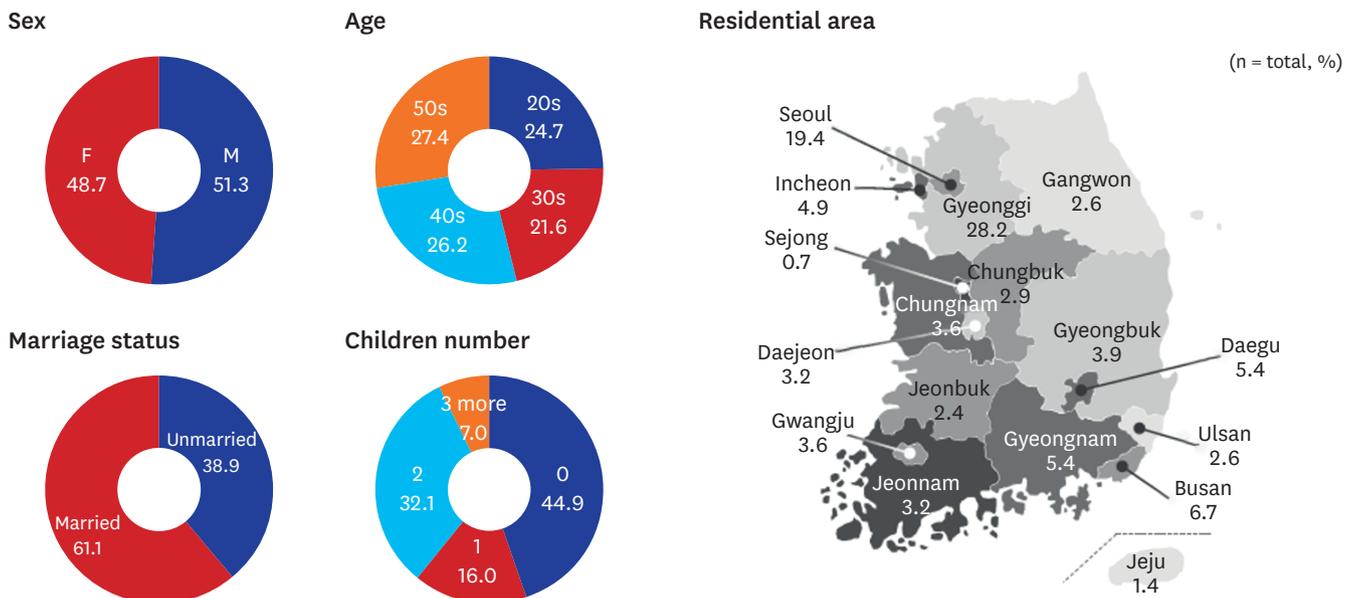


Fig. 1. Characteristics of respondents of the social research panel. F = female, M = male.

Table 1. Reasons for low fertility

Varibales	Total (N = 1,002)	M (n = 514)	F (n = 488)	P value ^b
Insecure income ^a	350 (34.9)	211 (41.0)	138 (28.4)	< 0.001
Economic burdens on child rearing	257 (25.7)	133 (25.9)	124 (25.5)	0.923
An atmosphere that emphasizes personal life	182 (18.1)	80 (15.6)	102 (20.9)	0.035
Excessive housing cost	100 (10.0)	67 (13.0)	33 (6.8)	0.001
Women career interruption caused by childbirth and child rearing	66 (6.6)	8 (1.5)	59 (12.0)	< 0.001
Pressure for providing education for children	15 (1.5)	7 (1.4)	8 (1.6)	0.919
Insufficient support for child rearing	13 (1.3)	3 (0.6)	10 (2.0)	0.077
Lack of confidence in childcare	7 (0.7)	0 (0.0)	7 (1.4)	0.019
Others	12 (1.2)	5 (1.0)	7 (1.4)	0.703

Values are given as number (percentage).

F = female, M = male.

^aCaused by unstable jobs and employment.

^bP value present statistical difference between M and F using χ^2 test.

response for this question was derived from 40 (34.2%) of respondents in their 20s, 45 (43.1%) of respondents in their 30s, 69 (53.4%) of respondents in their 40s, and 97 (71.4%) of respondents in their 50s. It shows responses of participants to the question “the necessity of children”. It was found that 718 (71.7%) of the entire participants agreed on this question. As for male respondents, positive response to this question was derived from 89 (68.4%) of male respondents in their 20s, 78 (70.3%) of male respondents in their 30s, 113 (84.3%) of male respondents in their 40s, and 124 (89.7%) of male respondents in their 50s. Regarding female respondents, a positive response to this question was derived from 41 (34.8%) of female respondents in their 20s, 61 (58.3%) of female respondents in their 30s, 98 (75.9%) of female respondents in their 40s, and 113 (83.5%) of female respondents in their 50s. **Table 2** also shows the responses of participants to the question “My children make me happy in my life”. It was found that 718 (71.8%) of the entire participants agreed on this question. As for male respondents, a positive response to this question was derived from 82 (63.7%) of male respondents in their 20s, 77 (69.3%) of male respondents in their 30s, 110 (82.5%) of male respondents in their 40s, and 125 (89.9%) of male respondents in their 50s. Regarding female respondents, a positive response to this question was derived from 46 (39.2%) of female respondents in their 20s, 63 (60.0%) of female respondents in their 30s, 102 (79.7%) of female respondents in their 40s, and 110 (81.5%) of female respondents in their 50s. The significance level of the above-mentioned variables was $P < 0.001$.

Furthermore, participants were asked about their intention to give birth if they were provided with more expanded governmental support than the current governmental support (**Table 3**). Specifically, this study investigated a possibility of change in their intention for childbirth caused by governmental support measures, such as an incentive of 100 million won in

Table 2. Perception of marriage and having children according to sex and age

Varibales	Total (N = 1,002)	M (n = 514)	F (n = 488)	P value ^a	M				P value ^b	F				P value ^b
					20s (n = 130)	30s (n = 112)	40s (n = 134)	50s (n = 139)		20s (n = 118)	30s (n = 105)	40s (n = 129)	50s (n = 136)	
It is better to get married	620 (61.9)	368 (71.7)	252 (51.6)	< 0.001	81 (62.2)	68 (60.8)	101 (75.7)	119 (85.7)	< 0.001	40 (34.2)	45 (43.1)	69 (53.4)	97 (71.4)	< 0.001
The necessity of children	718 (71.7)	404 (78.7)	313 (64.3)	< 0.001	89 (68.4)	78 (70.3)	113 (84.3)	124 (89.7)	< 0.001	41 (34.8)	61 (58.3)	98 (75.9)	113 (83.5)	< 0.001
The feeling of happiness brought by children	718 (71.7)	395 (76.9)	323 (66.2)	< 0.001	82 (63.7)	77 (69.3)	110 (82.5)	125 (89.9)	< 0.001	46 (39.2)	63 (60.0)	102 (79.7)	110 (81.5)	< 0.001

Values are given as number (percentage).

F = female, M = male.

^aP value present statistical difference between M and F using χ^2 test.

^bP value present statistical difference by generation using χ^2 test.

Table 3. Intention to give birth according to national support

Varibales	Intention to give birth (n = 1,002)				P value
	It will significantly increase	It will slightly increase	It will not increase significantly	It will not increase at all	
An incentive of 100 million won in cash	440 (43.9)	393 (39.2)	125 (12.4)	44 (4.4)	0.002
Childcare support ^a	638 (63.7)	299 (29.9)	43 (4.3)	22 (2.2)	0.002
Free housing support	674 (67.3)	260 (25.9)	44 (4.4)	24 (2.4)	0.002
Ensured paid leave of absence for three years	645 (64.3)	281 (28.1)	54 (5.4)	22 (2.2)	0.002
Free education support for children	658 (65.7)	259 (25.9)	56 (5.6)	29 (2.9)	0.002
Free support for childbirth and medical expenses for children	627 (62.6)	280 (28.0)	69 (6.9)	26 (2.6)	0.002

Values are given as number (percentage). P value present statistical difference among sample ratios according to types of intention to give birth using multinomial test.

^aChildcare support means providing childcare expenses and childcare assistants.

cash, childcare support based on childcare expenditures and supply of nursing helpers, free housing support, ensured paid leave of absence for three years, free education support for children, and free support for childbirth and medical expenses for children. When participants were offered an incentive of 100 million won in cash, 43.9% of the participants (439) who showed a positive response answered that they will be significantly willing to give birth. 39.2% of them (393) answered that they will be slightly willing to give birth. However, participants showed a higher level of significantly and slightly (number, %) intention to give birth when they were offered with full-scale governmental childcare service (638, 63.7%; 299, 29.9%), free housing support (674, 67.3%; 260, 25.9%), ensured paid leave of absence for three years (645, 64.3%; 281, 28.1%), free education support for children (658, 65.7%; 259, 25.9%), and free support for childbirth and medical expenses (627, 62.6%; 280, 28.0%) than that when they were offered with an incentive of 100 million won in cash. The significance level of the above-mentioned variables was $P = 0.002$.

Table 4 shows the opinions of participants for solving the low fertility problem. Each value is the sum of the number of samples answered in the 1st and 2nd positions selected in the survey except 'It should be expanded'. As indicated in this table, 796 (79.5%) of the entire participants (424, 82.5% of the entire male participants and 373, 76.4% of the entire female participants; $P = 0.022$) responded that the scale of the current government support should be expanded to solve the low fertility problem. In addition, 843 (84.1%; $P = 0.001$) of the entire participants mentioned that the low fertility problem can be solved if the entire Koreans put efforts to overcome this problem together. The 812 (81.0%; $P < 0.001$) of the entire participants stressed the necessity of sufficient support for childbirth and child

Table 4. An analysis of perception of respondents toward national support for low fertility and measures for solving the low fertility problem

Varibales	Total (N = 1,002)	M (n = 514)	F (n = 488)	P value ^b	20s (n = 248)	30s (n = 217)	40s (n = 263)	50s (n = 275)	P value ^c
The current national support for childbirth and child rearing									
It is sufficient ^a	258 (25.7)	117 (22.7)	141 (28.9)	0.032	53 (21.3)	53 (24.4)	61 (23.1)	90 (32.7)	0.014
It is effective ^a	379 (37.8)	170 (33.1)	209 (42.8)	0.002	75 (30.2)	79 (36.2)	95 (36.1)	129 (46.9)	0.001
It should be expanded	796 (79.5)	424 (82.5)	373 (76.4)	0.022	202 (81.0)	180 (83.1)	212 (80.8)	203 (73.7)	< 0.001
Measures for solving the low fertility problem									
If we put efforts together ^a	843 (84.1)	460 (86.2)	400 (81.9)	0.001	191 (77.0)	174 (80.0)	229 (87.1)	249 (90.5)	< 0.001
Sufficient support ^a	812 (81.0)	440 (85.6)	317 (76.0)	< 0.001	188 (75.8)	172 (79.3)	216 (82.2)	236 (85.8)	0.028
Improvement on perception of childbirth and child rearing ^a	740 (73.8)	378 (73.5)	362 (74.2)	0.874	163 (65.7)	149 (68.7)	106 (78.3)	222 (80.7)	< 0.001

Values are given as number (percentage).

F = female, M = male.

^aEach value is the sum of the number of samples answered in the 1st and 2nd positions selected in the survey.

^bP value present statistical difference between M and F using χ^2 test.

^cP value present statistical difference by generation using χ^2 test.

rearing to solve the low fertility problem. In **Table 4**, the positive perception of respondents toward national support for low fertility and measures for solving the low fertility problem statistically significantly increased with age.

DISCUSSION

This social research panel study found that women in their 20s and 30s, who are directly concerned with pregnancy and childbirth as active reproductive age, showed a relatively negative view toward marriage and childbirth. The desire for childbirth was higher when institutional support, such as childcare support and free housing support, was provided than when an incentive was provided in cash.

Policies on population in South Korea can be classified as those in a childbirth control period, those in a transformation period, and those in a childbirth promotion.² In the childbirth control period from 1962 to 1995, the Korean government controlled childbirth based on family planning. In the transformation period from 1996 to 2004, the Korean government transformed its goal and actions for controlling an increase in population into those for improving public health service for mothers and their children. As the fertility rate has been low constantly since the beginning of 2000, the Korean government has actively promoted childbirth. Since it established the Basic Plan on Low Fertility and Aging Society in 2005, it has formulated the revised Basic Plan on Low Fertility and Aging Society at the interval of five years and implemented various relevant policies. The fertility rate decreased significantly in the 2000s and rebounded after the establishment of the Low Fertility and Aging Society Committee in 2005. However, the lowest-low fertility phenomenon has been aggravated since 2012.

Although the Korean government has constantly increased the budget for solving the low fertility issue, the fertility rate has gradually decreased. Several studies on evaluating Korean policies on managing the low fertility problem reported that the Korean government showed poor performance for solving the low fertility problem.^{6,7} Accordingly, the core policies on low fertility formulated by the current government received the lowest scores in terms of design, implementation, and performance.⁸ These analytic results indicated that existing incentives on childbirth brought temporary effects and failed to increase the fertility rate constantly. In other words, the Korean government faced policy failure because it failed to reflect a chronological change in existing policies on promoting childbirth.

Kim et al.⁹ examined the transformation of low fertility policy paradigms and reported that the life course of men based on labor and the life course of women based on their families were dismantled. Accordingly, it stated that the life courses of both men and women were transformed into labor-based life courses. People in their 20s and 30s witnessed the rapid dissolution of norms associated with marriage or the gender role in their families. In addition, they clearly recognized themselves as the most important unit in their life courses. Women showed the aforementioned changes more quickly and emphasized their autonomy for marriage, pregnancy, and childbirth. In this previous study, the youth was asked about the effect of marriage on their lives in general and their opinions about childbirth. The 52.8% of female respondents and 43.0% of male respondents commented that marriage can negatively affect “the possibility of living as desired”. The 52.1% of female respondents and 45.6% of male respondents mentioned that marriage can negatively affect ‘the possibility of appreciating desired hobbies and leisure time’. Thus, these analytic results were similar to

those derived in this study. As for childbirth, 61.4% of female respondents and 52.0% of male respondents stated that 'they do not have a childbirth plan'. Particularly, nearly 70% of female respondents in their 20s showed a negative attitude toward childbirth.⁹ As explained above, this study carried out a panel analysis and found that only 34.2% of female respondents in their 20s agreed on the item 'it is better to get married'. Moreover, only 34.8% and 39.2% of female respondents agreed on the items of the necessity of children and happiness brought by children, respectively. In this regard, the analytic results on the negative attitude of female respondents toward childbirth in the previous study were similar to those in this study.

A previous study¹⁰ also analyzed the transformation of low fertility policy paradigms and reported that women preferred the development of their career or economic foundation to marriage when it came to the opinions of the youth about marriage and childbirth. Men responded that they can get married and rear their children when stable employment and housing were ensured. That is, 'quality of life' and 'gender equality' served as the essential conditions for women to decide marriage and childbirth. Under the traditional male-centered family system, men were required to support the living of their families. However, in modern times, the patriarchal family system was dismantled and transformed into a family system based on two breadwinners. Accordingly, there has been an increasing demand for redistribution of housework and childcare work, which were performed mainly by women in the past, based on both men and women. In accordance with such demand, it is required to approach marriage and childbirth issues from the perspective of gender equality. If men do not share housework and childcare work despite the participation of women in economic activities as they did not in the past, women will constantly avoid childbirth.

Similarly, according to a study published in 2020,¹¹ 'securing time' was presented as an essential condition for childbirth and child rearing. The extent to which parents allocate their time to work and childcare can be an important factor in determining the birth and rearing of children. It was stated that creating a social environment in which work-life balance can be achieved by reducing excessive working hours and securing time for child rearing is the top priority task to be considered for overcoming the low fertility rate.

Although it was not reported in the research result of this study, the analytic result of questionnaires (**Supplementary Data 1**) indicated that approximately 60% of respondents in their 20s and 30s did not want to get married and yearned for single life. As shown in **Table 3**, respondents emphasized the necessity of sufficient support for childbirth and childcare and the improvement of awareness of childbirth and childcare. In other words, the Korean government should support women to maintain the balance between their work and family by preventing childbirth and childcare from threatening women career interruption and their autonomy and encouraging both men and women to share burdens caused by childcare. Without these fundamental socio-economic changes, it difficult to change the negative perception of women in their 20s and 30s toward marriage and childbirth. Comparing with other Western welfare states, the three areas of family policy, cash, service, and time policy, took theirs forms in Korean society. However, in one study,¹¹ it was stated the effectiveness of the low fertility policy has been lacking as the childcare support policy in Korean society, because it has been promoted with the goal of expanding the policy itself. To implement effective policies, it was presented that the public policies of childcare support should be expended by restructuring the childcare support system to ensure a balance between work and childrearing, and by shifting the role from a government support to an active supplier.

Kang et al.² proposed 'New Rebalancing' in their research paper to focus on and improve the quality of women's lives. They also emphasized a need for performing rebalancing of the roles of men and women, rebalancing of work and family life, rebalancing of the labor market, and rebalancing cost structure, and re-defining the concept of a family. As reported in their study, the Korean government should focus on the quality of women's lives in the process of revising existing policies to help women increase their happiness based on communication with their children and a feeling of happiness shared with their children beyond problems and difficulties related to child rearing. To this end, the Korean government should establish policies on encouraging both men and women to share housework and childcaring work to help them maintain the balance between their work and family, providing various types of jobs to prevent women from being concerned about their career interruption caused by childbirth and child rearing, and supporting costs required for housing, child rearing, and education for children. The Korean government can also establish childbirth-friendly environment by reflecting various family types, such as a single parent family including a family based on a single mother and same-sex parents, in housing support policies for newly married couples, which can be applied by only those married through general processes.

Lastly, a study on the distribution of functions between the central and local governments of the low fertility policy¹² suggested that in order to overcome the low fertility, the central and local governments should work together to improve the practical system to implement policies through service provider and financial support. It is also proposed that a practical and effective low fertility policy should be implemented through timely feedback and evaluation of each project and policy through clear goals and appropriate function distribution.

In conclusion, further research should be conducted to develop policies that focus on significant variables to overcome the worsening low fertility problem. This study found that a decrease in the TFR was affected mainly by the negative perception of women in their 20s and 30s toward marriage, childbirth, and the necessity of children. Therefore, policy efforts should be made to convert their negative view into a positive view. There is an urgent need for a cultural movement to change the perception of the public that childbirth is a noble and socially valuable thing, and that it is a job that promotes personal happiness.

To successfully accomplish such conversion of awareness, the Korean government should provide a socio-economic system that enables women in their 20s and 30s to share housework and childcaring work with men and maintain a balance between their work and family without worrying about their career interruption caused by childbirth and child rearing. Furthermore, the Korean government should perform systematic enhancement simultaneously by providing support for rearing children, providing education for children, and covering medical expenses for children for free. There systematic change will promote women in their 20s and 30s to reduce their burdens on child rearing.

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SUPPLEMENTARY MATERIALS

Supplementary Data 1

Questionnaires

[Click here to view](#)

REFERENCES

1. Statistics Korea. Results of birth and death statistics in 2020. http://kostat.go.kr/portal/korea/kor_nw/1/2/3/index.board?bmode=read&bSeq=&aSeq=388265&pageNo=1&rowNum=10&navCount=10&currPg=&searchInfo=&sTarget=title&sTxt=. Updated 2021. Accessed March 20, 2021.
2. Kang DS, Kim MG, Kim JI, Lee SY, Lee SL, Lee KH, et al. *Integrated Policy Measures to Respond to the Low Fertility Rate. National Research Council for Economics Humanities and Social Sciences Collaborative Research Series 20-16-01*. Seoul, Korea: National Research Council for Economics Humanities and Social Sciences; 2021.
3. Presidential Committee on Ageing Society and Population Policy. *The Fourth Plan on Low Birth and Ageing Society (2021–2025)*. Sejong, Korea: Ministry of Health and Welfare; 2020.
4. Kim KS, Heo GH, Kim YS, Kim SM. *Analysis of Current Economic Issues No. 94: Causes and Economic Impact of the Low Fertility Rate in Korea*. Seoul, Korea: National Assembly Budget Office; 2018.
5. Kim JH, Lee SY, Choi IS. *A Study on Necessity and Feasibility of a New Panel Dataset for Population Policy*. Sejong, Korea: Korea Institute for Health and Social Affairs; 2018.
6. Won JW, Lee SY. *Analysis of Effectiveness of Low Fertility Policy*. Sejong, Korea: Korea Institute for Health and Social Affairs; 2017.
7. Kim SW. *Low Fertility Measure Evaluation II (Priority of Policy)*. Seoul, Korea: National Assembly Budget Office; 2016.
8. Kang DS. *Integrated Policy Management Plan. National Research Council for Economics Humanities and Social Sciences Collaborative Research Series 18-40-01*. Seoul, Korea: National Research Council for Economics Humanities and Social Sciences; 2018.
9. Kim EJ, Song HJ, Bae HJ, Sun BY, Choi JH, Hwang JM. *A Study on Paradigm Shift in Response to Low Fertility Policy (I): Analysis of the Gendered Life Prospects and Policy Coherence of Young People*. Seoul, Korea: Korean Women's Development Institute; 2019.
10. Kim J, Song HJ, Bae HJ, Choi JH, Sung K, Hwang JM, et al. *A Study on Paradigm Shift in Response to Low Fertility Policy (II): Reconstruction of Discourses to Respond to Low Fertility*. Seoul, Korea: Korean Women's Development Institute; 2019.
11. Kim EJ, Jung GW, Song HJ, Kang MJ, Kim NJ, Choi YJ, et al. *A Study on the Establishment of Mid- to Long-term Countermeasures for Low Fertility: Focusing on 'A Society Where We Work Together and Care for Each Other'*. Seoul, Korea: Korean Women's Development Institute; 2020.
12. Go KH. *A Study on the Distribution of Functions Between Central and Local Governments in Low Fertility Policies*. Wonju, Korea: Korea Research Institute for Local Administration; 2017.