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Childbearing intentions and influencing factors among single young adults in South Korea: a cross-sectional study

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Purpose: To identify the childbearing intentions of young adults in South Korea and examine the factors influencing them using a social-ecological model (SEM).
Methods: A descriptive cross-sectional study design was used. Unmarried employed men and women (n=181) aged 25–40 years completed an online survey. The data included socio-demographic characteristics and responses at four levels: (1) intrapersonal (perception of parenthood and fertility knowledge), (2) interpersonal (quality of family relationships), (3) institutional (work-family culture), and (4) community and public policy (adequacy of government policies and social support systems). Data were analyzed using descriptive statistics, correlations, and multiple logistic regression.
Results: Approximately 77% of the participants planned to have children, and more than 60% wanted to have two or more children. Among the four levels of SEM, only intrapersonal factors, including intention to marry, fertility knowledge, and attitudes toward parenthood, were statistically significant in influencing childbearing intentions. The model explaining the intention to have a child demonstrated an explanatory power of 59.6%, incorporating factors such as marital intention, perceptions of parenthood, and fertility knowledge.
Conclusion: A noticeable gap exists between childbearing intentions and childbirth in South Korea. These findings provide insights into the nursing educational content needed for delivering family planning education to young adults. Targeted interventions such as counseling services and community education should be integrated into nursing practice. Moreover, nursing curricula should discuss factors influencing childbearing intentions to equip future nurses better to support young adults' family planning decisions.

Keywords: Family planning services; Reproductive behavior; Young adult

INTRODUCTION

In South Korea, families were traditionally formed through marriage and are regarded as legal and social units. In a small community, marriage mainly involves childbearing and emotional support functions [1]. The number of marriages experienced a significant one-third decline, decreasing to 191.690 in 2022 from the figure recorded in 2015 [2]. This was the lowest since marriage statistics were first compiled in the 1970s. In 2002, the average age at first marriage was 29.8

years for men and 27.0 years for women, and in 2022, the average age at first marriage was 33.7 years for men and 31.3 years for women [3]. The decline in the marriage rate and postponement of marriage contributed to a reduction in the birth rate in South Korea.

South Korea has the lowest birth rate among the member countries of the Organization for Economic Cooperation and Development (OECD) [4]. The sharp decline in the birth rate is attributed to birth control policies initiated by the Korean government in the 1960s and the social atmosphere favoring smaller families [5]. Additionally, changes in the values and attitudes of the younger generation toward marriage, childbearing, and family have contributed to the decline in birth rates [6]. Dissimilar to the older generation, which regards marriage and childbearing as obligatory, South Korea's younger generation has increasingly considered marriage and childbirth options. Additionally, the growing number of women with higher education and career pursuits and job market competition have accelerated childbearing delays. This trend has further contributed to a decline in birth rates.

The postponement of parenthood has become a popular trend in developed countries in recent decades [7]. Researchers have demonstrated that socioeconomic factors lead to a negative attitude towards childbearing among women [8], with other studies highlighting economic stability as a requirement for parenthood [9] and financial stability, adequate housing, and stable relationships as key determinants in the decision to become parents [10]. In many countries, several interrelated factors, including the longer pursuit of education, changes in gender roles, economic insecurity, and individual characteristics and culture, are associated with delays in childbirth among young adults [11,12]. The younger generation in South Korea is experiencing difficulties related to job preparation, tuition fees, and housing [13]. Difficulties in obtaining a job cause generation of marriageable age to be economically unstable, which can lead to late marriage, non-marriage, and low birth rates. To better understand the complexities associated with childbearing among young adults in South Korea, it is important to consider both personal and environmental factors. Therefore, we identified the intention to have a child among single Korean men and women and examined the factors influencing such intentions from a socio-ecological model (SEM) perspective.

The SEM developed by Bronfenbrenner [14] proposes that the combined influence of individual characteristics and social and environmental features affects the outcomes. McLeroy et al. [15] modified the ecological model for health promotion. In this model, intrapersonal factors, interpersonal processes, primary groups, institutional factors, community factors, and public policies determine an individual's behavior. The SEM by McLeroy et al. [15] was utilized in this study because it emphasizes the importance of environmental support in delivering health promotion, implementing environmental interventions to facilitate individual behavioral changes, and recognizing that the responsibility for an individual's health cannot be solely determined by personal behavior. This model can comprehensively analyze an individual's childbearing intentions and environmental interventions that can support young adults' childbearing decisions. The early adult group, between the ages of 20 and 40, mainly strives to build a social, professional, and financial foundation and form a family in the developmental cycle of life. These young adults can be considered the prospective parent generation of the near future concerning their desire for marriage and parenthood. The SEM framework's analysis of factors influencing the intention to have a child will inform educators, researchers, and policy developers of the intra- and interpersonal effects on young adults of marriageable age and how best to target intervention programs.

METHODS

Ethical statements: This study was approved by the institutional review board (IRB) of Ewha Womans University (No. 202209-0002-01). Informed consent was obtained from all participants.

1. Study Design

A cross-sectional descriptive design was used for the online survey. The reporting of this study was based on the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines [16].

2. Theoretical Framework

Based on SEM, this study modeled the following four-level variables as factors influencing young adults' intention to have a child: (1) intrapersonal factors, (2) interpersonal factors, (3) institutional factors, and (4) community and public policies. The fourth and fifth levels of the original SEM images were combined. Figure 1 presents the conceptual frame-

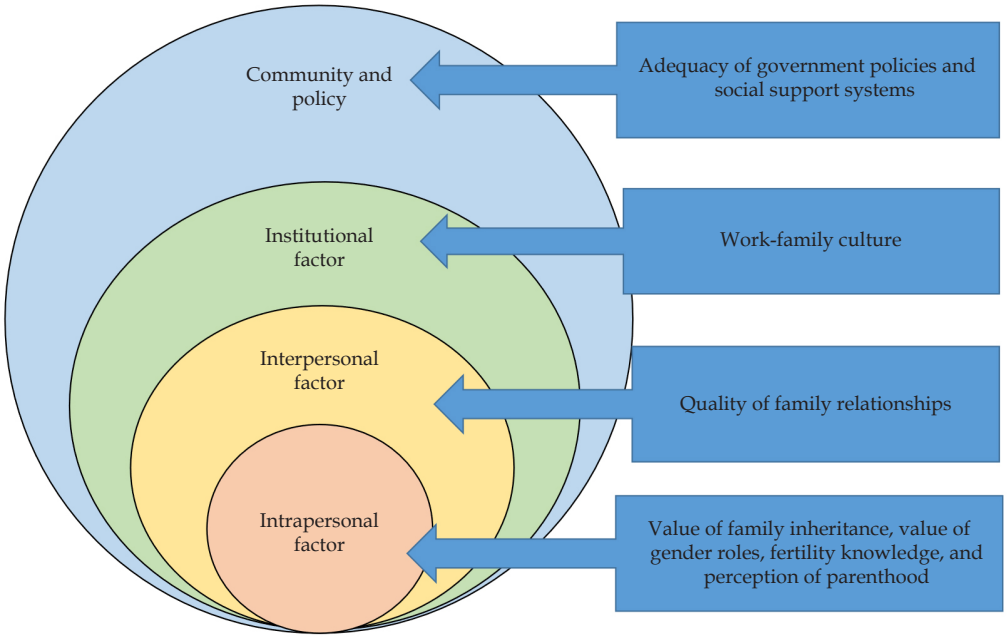

Figure 1. Four-level variables affecting intention to have a child within socio-ecological model.

work of this study. This study aimed to describe the intention to have a child among single Korean men and women and to examine the factors influencing such intentions from the SEM perspective. This study selected the variables based on SEM to examine the factors influencing childbearing intentions. At the individual level, variables such as the value of family inheritance, gender roles, fertility knowledge, and perception of parenthood were included to reflect how personal beliefs and attitudes impact fertility decisions. The quality of family relationships was considered at the interpersonal level, recognizing that supportive family dynamics significantly influenced childbearing intentions. Additionally, the institutional level included work-family culture because its impact on balancing work and family responsibilities was acknowledged. Finally, the adequacy of government policies and social support systems were included at the community and public policy levels, highlighting their influence on family planning decisions. These variables aligned with the SEM framework, addressing the interplay between individual and interpersonal relationships, institutions, communities, and public policies on childbearing intentions.

3. Study Setting and Sample

After obtaining permission from website administrators, we collected data from five Korean networking websites with 5,000–2,966,540 members. These websites are large online communities where single men and women post ideas, information, and thoughts concerning marriage, childbirth, and parenthood. Participants were eligible for this study if they (1) were aged between 25 and 40 years, (2) were unmarried, (3) did not have children, or (4) were employed at the time of data collection. Based on the G*Power ver. 3.1 program (Heinrich-Heine-Universität Düsseldorf; http://www.gpower.hhu.de/), a sample size of at least 161 was required to detect a medium effect size (odds ratio, 1.65), with a statistical power of 0.80 at an alpha level of 0.05. With an estimated dropout rate of 10%, 177 participants were included in this study. A total of 181 individuals participated in this study, which is a satisfactory sample size. We included the enrolled participants because we collected data online during a certain period in December and wanted sufficient data; therefore, we did not delete the number. We reported the final number of patients to the IRB and obtained their approval. We had more female than male participants, but since this was an anonymous online data collection, we could not control for the ratio of sex.

4. Measures

Tee scales measuring participants' fertility knowledge, perception of parenthood, and work-family culture were trans-

lated from English into Korean based on the guideline of DeVellis [17]. The translation was conducted after permission was obtained from the developer of the original scale. Five nursing experts, four professors, and one doctoral student with experience in measurement translation evaluated the content validity using the item-level content validity index (I-CVI). The I-CVIs of the scales assessing fertility knowledge, perception of parenthood, and work-family culture were 1.0, 0.98, and 0.99, respectively, indicating good content validity [18].

1) Socio-demographic characteristics of participants

Participants' socio-demographic characteristics were collected using a socio-demographic form. This form included questions concerning the respondents' sex, age, education level, employment status, monthly income, and religion. The form also included questions concerning the participants' intentions to marry. Additionally, study variables were collected at four levels, as suggested by the SEM: (1) intrapersonal factors, (2) interpersonal factors, (3) institutional factors, and (4) community and public policy.

2) Intrapersonal factors

(1) Value of family inheritance

Participants' value of family inheritance was measured using the question, "Do you think it is necessary to have at least one son for family succession and inheritance?" Participants were asked to rate their beliefs on a 7-point Likert scale ranging from 0 (not at all) to 7 (absolutely). A higher score indicated a stronger degree to which the participants believed that having a child inheriting the family line was important.

(2) Value of gender role

Participants' values of gender roles were measured using the question, "Do you think that husbands and wives should have separate family life responsibilities?" Participants were asked to rate their beliefs on a 7-point Likert scale ranging from 0 (not at all) to 7 (absolutely). Higher scores indicated a stronger degree to which the participants believed their family life roles were fixed.

(3) Perception of parenthood

Participants' perceptions of parenthood were measured using the Korean version of the Parenting Expectation Questionnaire (PEQ). The original PEQ was developed to assess college students' motivations and expectations for parenthood [19]. The PEQ consists of 24 items, and participants are asked to rate their agreement with each item on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The total scores ranged from 0 to 96. Higher scores indicated that the respondents were strongly motivated to become parents and believed that having children had more benefits than costs. The internal consistency of the instrument was 0.89.

(4) Knowledge of fertility

Participants' fertility knowledge was measured using the Korean version of the Cardiff Fertility Knowledge Scale (CFKS) [20]. The Korean version of the CFKS comprises 13 items that assess fertility knowledge, decreased fertility, factors associated with infertility, and misconceptions about fertility. Correct answers were given a score of 1, whereas incorrect and "do not know" answers received no scores. The total score ranges from 0 to 13, with a higher score indicating a higher level of knowledge about fertility. In this study, the Kuder-Richardson (KR 20) Korean version of the CFKS was 0.62.

3) Interpersonal factors: quality of family relationship

Participants' perceived quality of relationships with their family members was measured using the Korean version of McMaster's Family Assessment Device-General Functioning (FAD-GF) [21]. The Korean version of the FAD-GF comprises 12 items assessing the healthy and unhealthy functioning of the family. Participants were asked to rate each item on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The total score ranges from 12 to 48, with higher scores indicating an unhealthy level of family functioning. A cut-off score of 30 or higher indicates a low-income family functioning [20]. In this study, the internal consistency of the Korean version of the FAD-GF was 0.90.

4) Institutional factors: work-family culture

Participants' perceived work-family culture was measured using the Korean version of the Work-Family Culture Measure (WFCM). The original WFCM was developed to assess culture and values regarding how much an organization supports and values the integration of employees' work and family lives [22]. The Korean version of the WFCM comprises 20 items assessing the following dimensions: managerial support for work-family balance, career consequences associated with using work-family benefits, and organizational

time expectations interfering with family responsibilities. Participants were asked to rate each item on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The total score ranges from 0 to 80, with a higher score indicating a greater supportive work-family culture. In this study, the internal consistency of the Korean version of the WFCM was 0.90.

5) Community and public policy: adequacy of government policies and social support systems

The degree of adequacy of government policies and social support systems for child-rearing was measured using a questionnaire developed by the research team. The questionnaire comprises six items assessing the adequacy of the following dimensions: maternity pay, childcare allowance, parental leave, counseling services for parenting, childcare support from the community, and childcare programs. Participants were asked to rate each item on a 5-point Likert scale ranging from 0 (very poor) to 4 (very good). The total score ranges from 0 to 24, with a higher score indicating a higher perceived adequacy of parenting-related policies or social systems.

5. Data Collection

The study participants were recruited from December 1 to December 31, 2022. Websites that single men and women could use to identify or share information on marital preparation and childbirth were initially searched. The administrators of each website were approached to obtain permission to post study information to recruit participants. After receiving permission from the administrators of the five websites, the researcher posted flyers containing information regarding the study. The flyer provided information on the research purpose, eligibility criteria, and participation methods. Additionally, a link to the online survey was provided through flyers. Individuals interested in the study could access the survey by clicking the link, and only those who consented could participate.

6. Data Analysis

Data were analyzed using IBM SPSS Windows software ver. 25.0 (IBM Corp.). Descriptive statistics were computed to summarize participants' characteristics and survey scores, including means, standard deviations, and percentages. Chi-square and t-tests were conducted to determine whether there was a difference in childbearing intentions according to the socio-demographic characteristics of the participants. Hierarchical multiple logistic regression analysis was performed to identify factors associated with childbearing intentions.

RESULTS

1. Characteristics of Participants

The mean age of the participants was 29.6 years (standard deviation=3.9), and 73.5% were women (Table 1). Approximately 95% of the participants graduated from university, and 81.8% were permanent employees. The proportion of those who indicated their average monthly income was between 2,000,000–4,000,000 Korean won was the highest at 72.9%. A total of 87.8% of the respondents reported that they had plans to marry. Among the participants, 76.8% intended to have a child in the future, and more than 60% (n=90) wanted two or more children (Table 1).

2. Descriptive Statistics of Variables

Descriptive statistics for each variable at the four levels suggested by the SEM. Regarding the intrapersonal variables, the mean scores for the value of family inheritance and gender roles were 0.87 (out of 7) and 1.13 (out of 7), respectively. The mean score of participants' perceptions of parenthood was 43.71 (out of 96), and fertility knowledge was 7.77 (out of 13). For the interpersonal-level variable, the perceived quality of family relationships had a mean score of 24.57 (out of 80). A family relationship score of less than 30 indicates healthy family functioning. Regarding the institutional-level variable, the mean score for work-family culture was 46.8 (out of 80). Regarding community- and public policy-level variables, the mean score for the adequacy of government policies and social support systems was 9.01 (out of 24) (Table 2).

1) Intention to have a child according to socio-demographic characteristic

There were statistically significant differences in the intention to have a child according to employment status ($\chi^2=3.92$, $p=.048$), monthly income ($\chi^2=7.81$, $p=.020$), and plan to marry ($\chi^2=28.43$, $p<.001$) among young adults.

Table 1. Characteristics of participants and intention to have a child according to socio-demographic characteristics (N=181)

Characteristic	Total	Intention to have a child		χ^2	*p*
		Yes	No		
Age (yr)	29.6±3.9				
≤29	106 (58.6)	26 (24.5)	80 (75.5)	2.09	.353
30–34	50 (27.6)	13 (26.0)	37 (74.0)	13 (26.0)	
≥35	25 (13.8)	3 (12.0)	22 (88.0)	3 (12.0)	
Sex					
Male	48 (26.5)	10 (20.8)	38 (79.2)	0.21	.650
Female	133 (73.5)	32 (24.1)	101 (75.9)		
Education level					
≤High school	10 (5.5)	4 (40.0)	6 (60.0)	3.49	.175
University graduate	154 (85.1)	32 (20.8)	122 (79.2)		
≥Graduate school	17 (9.4)	6 (35.3)	11 (64.7)		
Employment status					
Permanent	148 (81.8)	30 (20.3)	118 (79.7)	3.92	**.048**
Temporary	33 (18.2)	12 (36.4)	21 (63.6)		
Monthly income (KRW)					
≤2,000,000	8 (4.4)	5 (62.5)	3 (37.5)	7.81	**.020**
2,000,000–4,000,000	132 (72.9)	30 (22.7)	102 (77.3)		
≥4,000,000	41 (22.7)	7 (17.1)	34 (82.9)		
Religious status					
No	107 (59.1)	29 (27.1)	78 (72.9)	2.23	.135
Yes	74 (40.9)	13 (17.6)	61 (82.4)		
Plan to marry					
No	22 (12.2)	15 (68.2)	7 (31.8)	28.43	**<.001**
Yes	159 (87.8)	27 (17.0)	132 (83.0)		
Intention to have a child					
No	42 (23.2)				
Yes	139 (76.8)				
The desired no. of children					
1	49 (35.3)				
2	81 (58.3)				
3	7 (5.0)				
4	2 (1.4)				

Values are presented as mean±standard deviation or number (%). Statistically significant results are marked in bold.
KRD, Korean won.

Table 2. Differences in four levels of variables according to intention to have a child

Level	Variable	Total score	Intention to have a child		t	*p*
			No (n=42)	Yes (n=139)		
Intrapersonal	Value of family inheritance	0.87	0.55±1.38	0.97±1.70	–1.65	.104
	Value of gender role	1.13	0.69±1.35	1.26±1.68	–2.25	.027
	Perception of parenthood	43.71	31.14±10.23	47.51±9.34	–9.73	<.001
	Knowledge of fertility	7.77	7.14±2.50	7.96±2.11	–2.10	.038
Interpersonal	Quality of family relationship	24.57	23.12±6.47	25.01±5.99	–1.76	.081
Institutional	Work-family culture	46.80	45.93±11.42	47.06±13.01	–0.51	.613
Community and public policy	Adequacy of government policies and social support systems	9.01	8.55±4.68	9.14±4.49	–0.75	.456

Values are presented as mean±standard deviation unless otherwise stated.

2) Differences in variables according to intention to have a child

The mean differences in each level of the variables according to childbearing intentions are presented in Table 2. There were statistically significant mean differences only in the intrapersonal-level variables: values of gender roles (t=–2.25,

p=.027), perception of parenthood (t=–9.73, p<.001), and fertility knowledge (t=–2.10, p=.038). Participants who responded that they were willing to have children had higher mean scores on the values of gender roles, perception of parenthood, and knowledge of fertility than those who did not.

3) Intention to have a child according to socio-demographic characteristics

An analysis of 181 participants revealed that employment status, monthly income, and marital plans significantly influenced the intention to have a child. Specifically, permanent employees were more likely to want children than temporary employees (χ^2=3.92, p=.048). Higher monthly income was associated with a greater desire to have children (χ^2=7.81, p=.020). Additionally, those planning to marry had a significantly higher intention to have children than those not (χ^2=28.43, p<.001). In contrast, sex (χ^2=0.21, p=.650), age (χ^2=2.09, p=.353), education level (χ^2=3.49, p=.175), and religious status (χ^2=2.23, p=.135) did not show significant differences in childbearing intentions. These findings suggest that economic stability and future life plans are more crucial in influencing the decision to have children than demographic factors, such as sex, age, education, and religion (Table 1).

4) Correlation among variables suggested by socio-ecological model

The correlations among the variables suggested by the SEM are presented in Table 3. Family inheritance (r=.26, p<.001) and gender roles (r=.24, p=.001) showed a statistically weak positive correlation with the perception of parenthood. Perception of parenthood (r=.16, p=.036) and fertility knowledge (r=.22, p=.003) had statistically weak positive correlations with the quality of family relationships.

5) Influencing factors on intention to have a child

Hierarchical multiple logistic regression analyses examined factors influencing the intention to have a child. The models included various predictors, such as employment status, monthly income, marriage plans, and perceptions of parenthood and fertility (Table 4).

Model 1 showed that the intention to have a child was positively associated with planning to marry (OR, 4.842; 95% confidence interval [CI], 1.217–19.264; p=.025). Perception of parenthood was strongly associated with a higher intention to have a child (OR, 1.192; 95% CI, 1.119–1.270; p<.001), as was knowledge of fertility (OR, 1.288; 95% CI, 1.020–1.626; p=.033). The R^2 value of model 1 was 59.6% (p<.001). Model 2 was adjusted for additional variables, including the quality of family relationships and work-family culture. Planning to marry was also a significant predictor (OR, 4.994; 95% CI, 1.242–20.081; p=.023). Fertility knowledge was marginally substantial (OR, 1.272; 95% CI, 1.001–1.617; p=.049). Perception of parenthood showed a strong positive association (OR, 1.192; 95% CI, 1.118–1.270; p<.001). Other factors, including employment status, monthly income, and values related to family and sex, were not significantly associated. The R^2 value for model 2 was 59.7% (p<.001). Model 3 incorporated additional variables related to work-family culture and government policies. Planning to marry remained a significant predictor (OR, 5.723; 95% CI, 1.343–24.388; p=.018). Perception of parenthood remained significantly associated with having a child (OR, 1.194; 95% CI, 1.119– 1.274; p<.001). Fertility knowledge was not significant (OR, 1.264; 95% CI, 0.992–1.610; p=.058). Employment status and monthly income, including values related to family and gender roles, were not significantly associated. The R^2 value of model 3 was 60% (p<.001).

Model 4 included all the variables, including the adequacy

Table 3. Correlation among levels of variables suggested by socio-ecological model

	(1) Value of family inheritance	(2) Value of gender roles	(3) Perception of parenthood	(4) Fertility knowledge	(5) Quality of family relationship	(6) Work-family culture	(7) Government policies & social support
	r (*p*)	r (*p*)	r (*p*)	r (*p*)	r (*p*)	r (*p*)	r (*p*)
(1)	1						
(2)	.54 (<.001)	1					
(3)	.26 (<.001)	.24 (.001)	1				
(4)	.03 (.734)	.13 (.086)	.02 (.795)	1			
(5)	.06 (.403)	.04 (.645)	.16 (.036)	.22 (.003)	1		
(6)	–.05 (.517)	–.15 (.041)	.06 (.401)	–.03 (.685)	.14 (.058)	1	
(7)	.12 (.112)	.10 (.202)	.18 (.015)	–.10 (.179)	.02 (.813)	.11 (.101)	1

Table 4. Four-level variables affecting intention to have a child within the socio-ecological model

Variable	Model 1		Model 2		Model 3		Model 4	
	OR (95% CI)	*p*	OR (95% CI)	*p*	OR (95% CI)	*p*	OR (95% CI)	*p*
Employment status								
Permanent	2.177 (0.605–7.835)	.234	2.290 (0.617–8.504)	.216	2.362 (0.633–8.816)	.201	2.426 (0.647–9.092)	.189
Monthly income (KRW)								
2,000,000–4,000,000	3.252 (0.469–22.569)	.233	2.966 (0.403–21.818)	.286	3.217 (0.431–24.000)	.254	3.555 (0.455–27.770)	.226
≥4,000,000	5.857 (0.677–50.665)	.108	5.397 (0.597–48.810)	.134	5.915 (0.645–54.234)	.116	6.681 (0.690–64.668)	.101
Plan to marry								
Yes	4.842 (1.217–19.264)	.025	4.994 (1.242–20.081)	.023	5.723 (1.343–24.388)	.018	5.702 (1.337–24.327)	.019
Value of family inheritance	0.879 (0.554–1.395)	.584	0.871 (0.550–1.378)	.554	0.862 (0.545–1.362)	.524	0.854 (0.539–1.353)	.502
Value of gender role	1.107 (0.722–1.698)	.641	1.110 (0.727–1.695)	.630	1.095 (0.713–1.681)	.679	1.132 (0.727–1.762)	.584
Perception of parenthood	1.192 (1.119–1.270)	<.001	1.192 (1.118–1.270)	<.001	1.194 (1.119–1.274)	<.001	1.195 (1.120–1.274)	<.001
Knowledge of fertility	1.288 (1.020–1.626)	.033	1.272 (1.001–1.617)	.049	1.264 (0.992–1.610)	.058	1.247 (0.978–1.590)	.075
Quality of family relationship			1.017 (0.931–1.111)	.705	1.020 (0.934–1.114)	.659	1.017 (0.931–1.111)	.708
Work-family culture					0.984 (0.940–1.030)	.480	0.985 (0.941–1.032)	.533
Adequacy of government policies and social support systems							0.976 (0.915–1.042)	.463
R^2	.596		.597		.600		.602	
χ^2 (*p*)	90.85 (<.001)		90.99 (<.001)		91.49 (<.001)		92.03 (<.001)	

OR, odds ratio; CI, confidence interval.

of government policies and social support systems. Planning to marry was a significant predictor (OR, 5.702; 95% CI, 1.337–24.327; $p = .019$). Perception of parenthood remained significantly associated with having a child (OR, 1.195; 95% CI, 1.120–1.274; $p < .001$). Fertility knowledge was not significant (OR, 1.247; 95% CI, 0.978– 1.590; $p = .075$). Other factors, such as employment status, monthly income, and values related to family and gender roles, did not show significant associations. The R^2 value of model 4 was 60.2% ($p < .001$). In models 1–4, the explanatory power exhibited slight increases; however, all models demonstrated significant factors associated with planning to marry and perceptions of parenthood. Model 1 incorporated another factor—fertility knowledge—an essential determinant of the intention to have a child.

Consequently, model 1 was selected as the final model.

DISCUSSION

This study aimed to identify unmarried young adults' childbearing intentions and the factors influencing childbearing. Influencing factors were analyzed from the SEM perspective to understand better the complexities of having a child. More than three-quarters of participants responded that they would like to have children in the near future. Intrapersonal factors, including participants' intentions to marry, fertility knowledge, and attitudes toward parenthood, influenced their intentions to have children.

In this study, approximately 77% of participants planned to have children, and more than 60% wanted to have two or more children. These findings indicate that many participants were favorable toward giving birth, and this result is similar to those reported in previous studies on unmarried populations in South Korea. Hong [23] reported that approximately 66% (of 259) of children between 18 and 45 years old were willing to have children, and approximately 61% reported wanting to have two or more children. In a study by Shin et al. [24], approximately 72% (out of 166) of university students planned to have children in the future, and the average number of desired children was two.

However, these findings differ from previous studies of

married populations and large-scale statistical surveys. Among the 1,779 newlyweds who had been married for less than seven years, the average number of children they wanted was 1.4 [25].

Approximately 68% of dual-income couples with one child reported no plans to have another child [26]. Additionally, the total fertility rate (TFR) in South Korea was 0.78 in 2022 [27]. The TFR refers to the number of children born per woman over their lifetime. The gap between these results may be attributed to the fact that our sample consisted of employed, unmarried young adults who may possess a comparatively optimistic outlook on their future financial stability and work-life balance, unlike married individuals or those experiencing uncertain employment conditions. Such optimism may contribute to more positive attitudes toward family planning decisions. Our findings suggest that in South Korea, although the intention to give birth is relatively high before marriage or at a young age, it may not lead to actual childbirth. Underachievement, a discrepancy between earlier fertility desires and achieved outcomes, is frequently observed in advanced industrialized societies, including South Korea [28]. Involuntary infertility, the development of competing priorities (e.g., education and career aspirations), or the repeated postponement of parenthood can lead to underachieving fertility goals, with these pathways often intersecting [28]. It is beneficial to help young, unmarried individuals who plan to have children understand this phenomenon and the trajectories that may lead to it, thus enabling them to make informed decisions regarding family planning and potential challenges.

Various factors influence childbirth, such as individual characteristics and the surrounding environment. From the perspective of SEM [15], four factors can affect a woman's childbirth intention: the individual, close relationships, the workplace, and society. In this study, intrapersonal factors, including intention to marry, fertility knowledge, and attitudes toward parenthood, were statistically significant factors influencing the intention to have children. These findings suggest that individuals with plans to marry, high fertility knowledge, and positive attitudes toward parenthood are more likely to have childbearing intentions. These results are similar to those of previous studies. The more favorable an individual's attitude toward marriage is, the higher the intention to have children [23]. In a narrative review [29], poor knowledge concerning fertility and misunderstanding of reproductive potential were the reasons for delays in childbearing. In a national cross-sectional study [30], higher levels of knowledge regarding reproduction were associated with higher fertility intentions, whereas childbearing-related anxiety was inversely associated with fertility intentions. Given these findings, this study provides additional insights for healthcare professionals, including nurses and policymakers, regarding the target population and the educational content that should be prepared to enhance positive attitudes toward childbirth and fertility rates.

Contrary to the researchers' expectations, family functioning did not influence childbearing intentions in this study. The mean score for family functioning, as assessed using McMaster's FAD-GF, was 24.6 (out of 36). Given that a mean FAD-GF score of 30 or more indicates ineffective family functioning [21], the family functioning perceived by the participants was within the normal range. In South Korea, families are traditionally considered the most important and basic societal unit. Within the culture of Confucianism, each individual grew up being cared for mainly within the family, leading an economic and leisure life as a family unit. However, through industrial evolution, primary functions traditionally performed within families, such as education and care, have been granted to institutions and social agencies. Along with the decline in functioning, the family structure shrinks rapidly. According to statistics, single-person households in Korea will account for 33.4% of the total population by 2022 [27] . Young adults of childbearing age in South Korea may not be aware of the importance of family formation or healthy family functioning. Instead, they value their relationships with friends and colleagues.

Among the interpersonal factors within SEM, a person's family members and close social circle peers or partners influence their behavior and contribute to their experiences [31]. Friends and colleagues' beliefs, values, and behaviors can shape an individual's perceptions of family and childbearing. The influence of friends and colleagues on an individual's decisions regarding pregnancy and childbirth appears significant, as evidenced by the finding that the estimated number of pregnancies would be reduced by 1,151 (5.8%) without the colleague effect [32]. Close relationships such as support networks, peer pressure, or role models can influence an individual's childbearing intentions. Therefore, future studies should further assess the quality of social relationships, including interaction frequency and intimacy in the workplace, neighborhood, and family.

From the SEM perspective, factors at other levels, such as

the perception of work-family culture (institutional level) and the adequacy of government policies and social institutions (community and public policy levels), did not influence childbearing intentions. South Korea has the lowest TFR among OECD countries [4]. Although governments and companies have implemented various supporting policies and systems (including maternity leave, family care leave, and reduction of working hours for childcare) to encourage childbirth, they cannot elevate birth rates. In this study, the extent to which participants perceived a family-friendly organizational culture was moderate (mean score of the 20-item WFCM=46.8 out of 80). Although it is difficult to compare as no other studies have used this instrument directly, our findings are similar to those of previous studies. One study reported a mean score of 54.96 among married workers employing a 14-item WFCM with a total score of 98 [13]. Moreover, the appropriateness of childcare policies promoted by the government was considered low in this study. These findings indicate that despite expanding the government's support policy, it still does not meet the needs of the young childbearing-age group.

Additionally, given the participants' generational traits, it is understandable why individual-level factors rather than relational or social factors had a greater influence on childbearing intentions. As previously discussed, South Korea has traditionally been recognized within the Confucian framework for its strong collectivist culture in which individuals identify with and maintain close ties with their families or organizations, often prioritizing collective goals over personal desires [33]. However, the emergence of the MZ generation (Millennials and Generation Z) has marked a cultural shift in South Korea. Researchers suggest that collectivism may no longer dominate, with this generation being the most individualistic in the country's history [34,35]. For the current participants, namely the MZ generation, individual traits such as marital intentions, fertility knowledge, and views on parenthood may significantly influence their behaviors or intentions compared to traditional collectivist values such as family or organizational expectations. While previous studies have highlighted the influence of social support systems and government policies on childbearing intentions, our findings suggest that these systems' perceived adequacy or efficacy may not align with participants' expectations or needs. Young adults may not view existing policies or support systems as sufficiently robust or relevant to their personal circumstances, which leads them to rely more on individual factors when making family planning decisions. This gap underscores the necessity of policies and interventions for childbearing intentions that are both available and perceived as meaningful and accessible by the intended target population of young adults.

Healthcare professionals, including nurses and experts in both clinical and community settings, play a crucial role in advocating for a family-friendly environment that supports childbearing and parenthood. Within the realm of nursing education, it is imperative to integrate comprehensive modules of reproductive decision-making into the curriculum. These modules should emphasize the detailed exploration of fertility options and family planning strategies. Acquiring such knowledge is vital to prepare nursing students to advocate for and support individuals in their reproductive choices effectively. Additionally, it is essential to provide nursing students with an understanding of the specific cultural context and societal trends in South Korea because numerous individual and environmental factors affect childbearing intentions. Intervention programs can be implemented in both hospital and community settings. In hospitals, nurses can offer comprehensive education and counseling regarding family planning and parenthood. Community education can be conducted through outreach programs, especially where traditional family values change. These interventions and educational initiatives are pivotal in shaping public perceptions of and decision-making regarding childbearing.

This study was limited in that most participants had an educational level of college or higher and had full-time jobs. These findings may not reflect the intention to have a child as perceived by economically and educationally vulnerable individuals. Additionally, although an online survey can engage individuals from various backgrounds and elicit honest answers, this may have caused a sampling bias in this study. Additionally, the data collected from websites are not guaranteed to represent single men and women in South Korea. Therefore, caution should be exercised when interpreting these results. Despite these limitations, this study is significant because it directly investigated the intention to have a child in a population group where marriage and family planning are required as developmental tasks. Most previous studies have analyzed fragmentary data collected at the national level; therefore, only limited information is available on personal characteristics (e.g., age, income, and education) related to the intention to have a child. Although having a child is an individual decision, providing a supportive envi-

ronment for child-rearing is important to allow individuals to choose to have a child. Analysis of the factors within the respective levels of the SEM framework in this study will inform healthcare providers, employers, and policymakers of the intra-and interpersonal effects on intentions to have a child among younger generations and how best to target interventions.

CONCLUSION

The functions and sizes of families have gradually decreased through industrialization, and the number of individuals planning to have children has reduced rapidly. South Korea has a low birth rate, which is recognized as a social and national problem. The intention to have a child was relatively high among the participants in this study; therefore, there was a gap between intention and actual childbirth. The findings of this study indicate that individual factors such as intention to marry, fertility knowledge, and attitudes toward parenthood are significantly related to the intention to bear children. Therefore, targeted interventions, such as providing counseling services for young adults, enhancing community education, and incorporating discussions on these factors into the nursing curriculum, are essential to increase birth rates. Further research is required to assess how young adults, including those with various educational levels and occupations, perceive the social environment and support related to their intention to bear children.

ARTICLE INFORMATION

Authors' contribution

Conceptualization: HS, AL MJ; Data collection: HS, AL SC, MJ; Formal analysis: HS, SC, MJ; Writing–original draft: HS, AL SC, MJ; Writing–review and editing: HS, AL SC, MJ; Final approval of the published version: HS, AL SC, MJ.

Conflict of Interest

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Data availability

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