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## Effect of gender sensitivity on attitudes toward marriage and childbirth among university students in South Korea



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Jae Hee Kim\*

Department of Nursing, Daejin University, Pocheon-si, Gyeonggi-do, South Korea

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#### ABSTRACT

This research delves into the intricate domain of gender sensitivity, a cognitive process rooted in the awareness of gender equality and the ability to actively endorse and practice it. The study focuses on a cohort of university students on the brink of marriageable and childbearing age, aiming to scrutinize the potential influence of gender sensitivity on their attitudes towards marriage and childbirth. Employing a convenience sampling method, 196 students spanning from first to fourth-year were enlisted as participants. Data were collected through online surveys conducted between April 5 and April 12, 2022. Our findings illuminate that male participants harbor a more affirmative disposition towards both marriage and childbirth compared to their female counterparts. Moreover, a significant positive correlation surfaces between attitudes towards marriage and childbirth. Intriguingly, the study exposes a notable inverse relationship between gender sensitivity and attitudes towards marriage ( $\beta$  = -.49, t = -7.13, p < 0.001) as well as childbirth ( $\beta$  = -.44, t = -6.45, p < 0.001). In light of these revelations, the study underscores the paramount importance of integrating gender sensitivity into strategies aimed at enhancing university students' perspectives on marriage and childbirth. Moreover, it advocates for a policy-oriented approach to ameliorate gender inequality on a societal scale. The study's profound significance lies in its revelation that, in a society lacking in gender sensitivity, the prevalence of marriages and fertility rates may exhibit a negative correlation with gender sensitivity. This underscores the imperative need for sustained governmental efforts to augment gender sensitivity.

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#### 1. Introduction

According to recent data from Statistics Korea, South Korea's total fertility rate peaked at 1.3 children per woman in 2012 and has gradually decreased since 2015. The total fertility rate reached 0.8 in 2020. This rate is below the OECD average of 1.6 children. Among the 38 member countries, South Korea is the only country with a total fertility rate of less than 1. The factors associated with low fertility rates include increasing the age of marriage, decreasing marriage rate, selective thinking about childbirth, increasing independent awareness regarding old age, changing views on marriage, and egalitarian mindsets about childrearing and family

\* Corresponding Author.

Email Address: hjw9266@daejin.ac.kr

https://orcid.org/0000-0003-3624-7710

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roles (Kim, 2013). In addition to these rapid social and environmental changes, the need for self-actualization and the burden of raising children are also emerging as factors associated with low fertility rates (Lee and Hong, 2014).

Meanwhile, the number of marriages decreased from 329,000 in 2011 to 214,000 in 2020, or by about 115,000 marriages, and continues to decrease. This decrease is also associated with recognizing that marriage is a choice rather than a necessity, opposing traditional values based on Confucianism (Bae, 2017; Kim, 2013). According to Statistics Korea, in 2020, the opinion that "it is fine whether I get married or not" became more prevalent from 2010 to 2018, with 42.3% of men and 50.8% of women concurring.

The Korean government has since implemented policies promoting marriage from various perspectives. The government's current understanding and countermeasures are depicted in The 4th Plan for Ageing Society and Population (Dec 2020), scoping the period between 2021 to 2025.

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Corresponding author's ORCID profile:

Compared to its predecessor, emphasis was put more on individual quality of life and less on promoting marriage and childbirth. Marriage and childbirth-promoting policies mainly focus on alleviating childcare burdens, including a better working environment, society-level responsibility for co-parenting, further socialization of childcare, reducing educational expenses, and so on.

Such policies centered on economic measures have been persisting across multiple regimes. The policy efforts, however, were proven ineffective, with the number of marriages and the fertility rate continuously declining. This failure points to the need to alter the underlying approach away from solely economic and consequential aspects. Genderside approaches, for example, can suggest the required complementary, if alternative, perspective. On the one side, it is expected to bring back forth the awareness-raising side of policy, which was mostly disregarded due to its ambiguous and gradual nature. On the other side, it may provide the missing link to why the policy efforts so far failed to improve the intermediate objectives, such as women's social status and working environments.

This study aims to explore the relationship between gender sensitivity to marriage and childbirth, which should be addressed together rather than separately. Although marriage is not necessary for bearing children, both the attitudes toward and the behaviors of marriage and childbirth tend to move together. This is especially true for conservative societies such as Korea, where marriage is considered a prerequisite before giving childbirth. For example, getting pregnant before marriage is considered a 'speeding,' often leading to a hastened wedding. Thus, despite marriages being increasingly regarded as a choice rather than a necessity and not necessarily leading to childbirth, marriage should still be considered altogether in trying to raise fertility.

Gender-related factors play common roles among the various factors leading to dwindling marriage and fertility rates. However, the effects of the gender-related factors hold differently for the genders. In Korea, gender inequality makes women skeptical toward marriage and childbirth, while men tend to have a more positive attitude toward them. This is partly because the Confucian and patriarchal family customs impose the non-financial, direct burdens of raising children on women, let alone distributing house chores unequally. Increasing economic engagements of women, combined with the unequal distribution of housework and child raising, further discourages women from giving childbirths. Meanwhile, government policies have failed to alleviate working women's problems, with childcare facilities ever lacking in both quantity and quality.

While gender inequality remains, the public's perception of the phenomenon took a turn as the concept of gender sensitivity became a central figure in the gender discourse. Gender sensitivity specifically characterizes the younger generation's

perception of gender equality since they came to contemplate the concept of gender sensitivity as their awareness of gender equality increased.

While the definition of gender sensitivity may vary depending on the perspective on gender and the research objective, it generally includes the concept of gender equality. Gender sensitivity narrowly refers to sensing and recognizing gender discrimination in everyday life (Kwak and Jeong, 2018; Mun, 2020). Broadly, it is also an active intellectual process that refers to the awareness of gender equality and the willingness and ability to practice it (Cho and Lee, 2020; Kim et al., 2019; Lindsay et al., 2019). Moreover, it is the ability to put gender equality policies into practice (Kim, 2021).

Although no large-scale survey has yet done, research on multiple job groups and the general population revealed some general characteristics related to gender sensitivity. Between genders, female generally has greater gender sensitivity than male. While results vary depending on whether an issue is related to economic justice, the younger groups tend to have greater gender sensitivity than older age groups. Also, married women and unmarried men are less gender sensitive than unmarried women and married men.

Identifying gender sensitivity as a key factor for advancing gender equality, governments, as well as feminist organizations, have endeavored to enhance gender sensitivity at policy and non-policy levels. While many developed societies have seen progress, Asian countries, including Korea, have been lagging behind. Proper recognition of gender sensitivity and sincere policy efforts have begun only recently, starting with judicial formalization in 2018.

Recent research on gender sensitivity has mainly attempted to determine its relationships with sexual behavior and attitudes, such as sexual knowledge, sexual violence, attitude toward contraception, and sexual autonomy (Yang et al., 2021). Moreover, studies have been conducted on the relationship between gender sensitivity and psychosocial factors such as individual personality, creativity, sociability, and self-esteem (Joo et al., 2020; Seo et al., 2020). However, it is difficult to find other published papers that have identified gender sensitivity in relation to childbirth and marital attitudes. Sexual perceptions can go beyond sexual behaviors and lead to marriage and childbirth (Ju et al., 2013; Lee and Hong, 2014). The effect of gender sensitivity on attitudes toward marriage and childbirth, however, is yet to be determined.

While attitudes do not necessarily predict behavior, a positive attitude toward marriage is more likely to lead to it (Lee and Hong, 2014). Likewise, a positive attitude toward childbirth can lead to childbirth (Lee and Hong, 2014). Therefore, attitudes toward marriage and childbirth can be used to estimate the number of marriages and fertility rate. The results of this study can serve as a practical basis for developing policies to improve attitudes toward marriage and childbirth and increase gender sensitivity. This study aims to determine the effect of university students' gender sensitivity on their attitudes toward marriage and childbirth. Specific objectives are as follows:

- 1)To determine the differences in gender sensitivity and attitudes toward marriage and childbirth according to the subjects' general characteristics.
- 2)To determine the correlation between gender sensitivity, attitude toward marriage, and childbirth.
- 3)To determine the effect of gender sensitivity on attitudes toward marriage and childbirth.

#### 2. Methods

#### 2.1. Research design

This study used a correlational design to determine the effect of university students' gender sensitivity on their attitudes toward marriage and childbirth (Fig. 1).



Fig. 1: Conceptual framework of this study

#### 2.2. Participants

The subjects of this study were 200 first to fourth-year university students sampled using a convenience sampling method. Two hundred subjects were recruited for data collection, as incomplete responses were expected. However, as this study used an online questionnaire, few incomplete responses were received. One hundred ninety-six responses were analyzed. There existed an imbalance between male and female respondents, the cause of which is assumed to be that female students are more engaged in the questionnaire topic. This was not intended in designing the convenience sampling process. Prior to data collection, the G\*Power 3.0.10 program calculated a minimum sample size of 138 for regression analysis. The following criteria were used to calculate the sample size: effect size of .15, the significance level of .05 (two-tailed), power of .95, and five predictors including predicted control and independent variables (Table 1).

 Table 1: General characteristics (N=196)

General characteristics	Categories	N (%)
Gender	Male	39 (19.9)
Genuer	Female	157 (80.1)
	19-21	69 (35.2)
Age	22	63 (31.5)
	23	33 (16.5)
	>24	31 (15.8)
Deligion	Yes	37 (18.9)
Religion	No	159 (81.1)
Opposite soy siblings	Yes	105 (53.6)
Opposite sex siblings	No	91 (46.4)
Dating ownerion co	Yes	158 (80.6)
Dating experience	No	38 (19.4)

#### 2.3. Research tools

#### 2.3.1. Gender sensitivity

To measure university students' gender sensitivity, a scale developed by Lee (2011) and

modified by Mun (2020) was used. Of Mun's (2020) original 20 items, 18 were selected, including perceptions of homosexuality, manliness (womanliness), feminists, gender discrimination, and more. Each item was measured on a scale ranging from strongly disagree (1 point) to strongly agree (5 points). For this Likert scale, higher total scores indicate greater levels of gender sensitivity. The Cronbach  $\alpha$  reliability coefficient was .69 in Mun's (2020) study and .83 in this study.

#### 2.3.2. Attitude toward marriage

To measure attitudes toward marriage, a scale developed by Lee and Hong (2014) for university students was modified and used in this study. This study's version comprises ten items. Each was measured on a 5-point scale ranging from strongly disagree (1 point) to strongly agree (5 points). The Cronbach  $\alpha$  reliability coefficient for the scale was .72 in Lee and Hong's (2014) study and .75 in this study.

#### 2.3.3. Attitude toward childbirth

To measure attitudes toward childbirth, a scale developed by Lee and Hong (2014) for university students was modified and used in this study. This study's version consists of 12 items. Each item was measured on a 5-point scale ranging from strongly disagree (1 point) to strongly agree (5 points). The scale's Cronbach  $\alpha$  reliability coefficient was .80 in Lee and Hong's (2014) study and .85 in this study.

#### 2.4. Data collection methods

Data collection used the Naver Form. It was conducted from April 5-12, 2022, with 200 first to fourth-year university students. An online survey was conducted because Korea's then-ongoing COVID-19 pandemic restricted any form of personto-person surveys. The survey instructions fully explained the details of participant protection. Information on the study's purpose and content was provided. The voluntary nature of participation was described, including the right to withdraw freely from the survey and the confidentiality of their information.

Furthermore, participants could proceed with the questionnaire only after providing consent. If they could not understand any questionnaire item, they could use the contact information in the instructions to request an additional explanation. This study obtained approval from D. University's Institutional Review Board (1040656-202204-SB-01-04) before data collection.

#### 2.5. Data analysis methods

T-tests or ANOVAs were used to determine the differences between the participants' gender sensitivity and willingness to marry and bear children according to their general characteristics. The relationship between gender sensitivity and attitudes toward marriage and childbirth was measured using the Pearson correlation coefficient. In addition, a multiple regression analysis determined gender sensitivity's effect on attitudes toward marriage and childbirth. However, a simple regression analysis was used to determine the effects per each item of gender sensitivity on attitudes toward marriage and childbirth.

#### 3. Results

# 3.1. Gender sensitivity and attitudes toward marriage and childbirth by general characteristics

Significant differences were found in the subjects' gender sensitivity according to gender (t=-6.69, p<.001) and age (F=2.67, p=.049). The level of gender sensitivity was higher in women than men and more pronounced in younger individuals (Table 2).

Men had more positive attitudes toward marriage than women (t=3.34 p<.001). Furthermore, significant differences exist in attitudes toward childbirth according to gender (t=4.65, p<.001) and religious affiliation or lack thereof (t=2.003, p=.047). That is, men and subjects with a religious affiliation had a more positive attitude toward childbirth (compared to women and those who reported lacking religious affiliation, respectively).

Table 2: Gender sensitivity, attitudes toward marriage and childbirth by general characteristics

General character	ristics	Gender sensitivity	Attitude toward marriage	Attitude toward childbirth
	Male	55.95±6.97	28.54±5.83	31.21±6.37
Gender	Female	66.73±9.43	25.29±5.34	25.56±6.88
	t( <i>p</i> )	-6.69(<.001)	3.34(.001)	4.65(<.001)
	19-21	66.35±9.66	25.26±5.60	25.83±6.74
	22	64.40±10.02	26.60±5.02	28.24±7.24
Age	23	65.18±9.34	25.85±5.94	26.48±7.03
	241	60.39±10.33	26.16±6.28	25.65±7.68
	F( <i>p</i> )	2.67(.049)	0.65(.582)	1.57(.198)
	Yes	62.11±7.27	27.51±4.60	28.78±6.74
Religion	No	65.16±10.42	25.57±5.73	26.19±7.16
	t( <i>p</i> )	-1.69(.094)	1.93(.056)	2.00(.047)
	Yes	65.25±9.69	25.95±5.56	25.91±7.25
Opposite sex siblings	No	61.81±10.26	25.91±5.62	27.58±6.93
	t( <i>p</i> )	1.01(.316)	0.05(.960)	-1.65(.101)
Dating	Yes	64.21±10.12	26.30±5.69	26.74±7.28
0	No	66.13±9.21	24.40±4.86	26.45±6.58
experience	t( <i>p</i> )	-1.07(.286)	1.91(.058)	0.23(.821)

### 3.2. Correlation between gender sensitivity and attitudes toward marriage and childbirth

Pearson's correlation analysis revealed that gender sensitivity has a negative relationship with

attitudes toward marriage (r=-.500, p<.001) and childbirth (r=-.489, p<.001). In addition, a positive correlation between attitudes toward marriage and childbirth was detected (r=.578, p<.001) (Table 3).

	Attitude toward marriage r(p)	Attitude toward childbirth r(p)
Gender sensitivity	500(<.001)	489(<.001)
Attitude toward marriage	-	.578(<.001)

## 3.3. Effect of gender sensitivity on attitudes toward marriage and childbirth

Regression was performed to determine gender sensitivity's effects on attitudes toward marriage and childbirth, controlling for the significant general characteristics in the regression analysis (Tables 4 and 5). No multicollinearity and autocorrelation problems were detected in the regression analysis. The variance inflation factors were 1.24 and 1.26, respectively. The Durbin-Watson values were 1.86 and 2.04, respectively. The regression model with marriage attitude as a dependent variable and gender sensitivity as an independent was statistically significant (F=21.59. p<.001). It had an explanatory power of 24.1%. Significance testing on

the regression coefficient revealed that gender sensitivity has a significant negative effect on attitudes toward marriage (t=-7.13. p<.001). The regression model with childbirth attitudes as a dependent variable was also statistically significant (F=23.28. p<.001). It had an explanatory power of 25.5%. In addition, the significance test revealed that gender sensitivity has a significant negative effect on attitudes toward childbirth (t=-6.45, p<.001).

Table 4: Effect of gender sensitivity on attitudes toward

marria	ge	
Attitude toward marriage		
В	t	р
28	-7.13	<.001
Adjusted R <sup>2</sup> =.241, F=21.59, p=<.001		
	Att B 28	B t 28 -7.13

Table 5: Effect of gender sensitivity on attitudes toward

	childbir	th	
	Attitude toward childbirth		
	В	t	р
Gender sensitivity	30	-6.45	<.001
Gender sensitivity	Adjuste	d R <sup>2</sup> =.255, F=23.2	28, p=<.001

Concerning gender sensitivity items that affect marriage attitudes, all but one item was found to be

significant. In addition, for all 18 items, higher levels of gender sensitivity were associated with less favorable attitudes toward marriage. Regarding childbirth attitudes, all but one item was found to be significant. High levels of gender sensitivity were associated with less favorable attitudes toward childbirth (Tables 6 and 7).

#### 4. Discussion

This study aimed to determine whether gender sensitivity affects attitudes toward marriage and childbirth among university students entering the marriageable and childbearing age. First, examining the differences in gender sensitivity by the subjects' general characteristics revealed that female university students have greater gender sensitivity than male students. This finding is consistent with previous studies (Kim, 2021; Yang et al., 2021) and appears to result from the fact that women in South Korea experience a relatively greater degree of gender inequality (Choi and Chang, 2016; Kim, 2018).

Itoms of gondor sonsitivity	Attitud	Attitude toward marriage		
Items of gender sensitivity		t	р	
I can't even imagine the possibility that a family member might be gay	-1.50	-5.40	<.001	
I can get along with a transgender person with no qualms	0.76	2.18	.031	
I am wary of people who openly express their hatred of homosexual or transgender people	-0.75	-1.98	.049	
I am disgusted by same-sex kissing*	-1.85	-5.61	<.001	
I want to raise my son to be manly and daughter to be womanly	-1.92	-5.44	<.001	
I feel comfortable when I am consistent with the expectations of my gender (manliness/womanliness)*	-1.21	-3.38	.001	
I feel frustrated by the distinctions between men's work and women's work	-1.06	-3.22	.002	
I dislike it more when women smoke than when men do*	-1.15	2.76	.006	
It is natural to me that men should protect women*	-1.45	-4.30	<.001	
I always find it strange that senior government officials and executives are mostly male	-1.93	-5.79	.001	
Feminists make me feel uncomfortable*	-1.36	-4.56	<.001	
I am uncomfortable with talk of sexism and gender equality*	-1.27	-3.72	<.001	
I feel ashamed when I think sexist thoughts	-1.82	-4.47	<.001	
It is important to me that I overcome my own sexism	-1.86	-4.23	<.001	
When someone is discriminated against for their gender, it doesn't feel like someone else's business	-2.04	-5.32	<.001	
A man who is bold toward a woman he loves is cool*	-1.39	-3.88	<.001	
I would rather want to die if I were infected with AIDS/HIV*	-0.55	-1.54	.124	
A man who knows when to use his fists is cool*	-1.11	-0.26	.001	
*: Calculated in reverse				

\*: Calculated in reverse

<b>Table 7:</b> Effect per item of gender sensitivity on attitude toward childbirth
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Itama of gondar consitivity	Attitude toward childbirth		
Items of gender sensitivity		t	р
I can't even imagine the possibility that a family member might be gay*	-1.74	-4.86	<.001
I can get along with a transgender person with no qualms	0.48	1.07	.286
I am wary of people who openly express their hatred of homosexual or transgender people	-1.60	-3.36	.001
I am disgusted by same-sex kissing*	-2.02	-4.71	<.001
I want to raise my son to be manly and daughter to be womanly	-2.15	-4.69	<.001
I feel comfortable when I am consistent with the expectations of my gender (manliness/womanliness)*	-1.55	-3.38	.001
I feel frustrated by the distinctions between men's work and women's work	-1.32	-3.15	.002
I dislike it more when women smoke than when men do*	-3.33	-4.49	<.001
It is natural to me that men should protect women*	-1.64	-3.75	<.001
I always find it strange that senior government officials and executives are mostly male	-2.50	-5.89	<.001
Feminists make me feel uncomfortable*	-1.37	-3.51	.001
I am uncomfortable with talk of sexism and gender equality*	-1.51	-3.44	.001
I feel ashamed when I think sexist thoughts	-2.49	-4.88	<.001
It is important to me that I overcome my own sexism	-2.70	-4.88	<.001
When someone is discriminated against for their gender, it doesn't feel like someone else's business	-2.48	-5.02	<.001
A man who is bold toward a woman he loves is cool*	-1.02	-2.18	.030
I would rather want to die if I were infected with AIDS/HIV*	-0.01	-0.01	.993
A man who knows when to use his fists is cool*	-1.99	-4.68	<.001
*: Calculated in reverse			

In addition, university students aged between 19 and 21 years were found to have higher levels of gender sensitivity than those aged 24 and over, consistent with the results of previous studies (Mun, 2020; Kim, 2021). This finding is associated with the fact that people of younger ages are more exposed to formal and informal channels of education and information.

The finding that unmarried men have a more positive attitude toward marriage and childbirth is similar to previous studies (Auh and Kim, 2013; Kim and Kim, 2022). Our society still views men's and women's family roles in a patriarchal light, and this tendency is stronger in men (Park, 2018). In addition, women typically bear the non-financial, direct burdens of raising children (Cho et al., 2020; Do, 2011). The above findings appear to result from these gender roles and parenting culture (Anderson and Kohler, 2013; Brinton and Lee, 2016; Hudde, 2018). Moreover, the above findings suggest that gender differences must be considered when developing policies that reflect the gender differences in marriage and childbirth attitudes to encourage marriage and childbirth. However, as these findings show the essential differences, further research is required to determine causal relationships and obtain accurate source data.

This study found a significant positive correlation between attitudes toward marriage and attitudes toward childbirth, confirming that policies encouraging childbirth and marriage should be promoted together (Ju et al., 2013). Despite the growing recognition that marriage is not necessary for bearing children, marriage and childbirth still correlate positively in countries with a conservative social culture, such as South Korea (Do, 2011).

The results of the multiple regression analysis revealed that gender sensitivity has a significant effect on attitudes toward marriage and childbirth. Higher levels of gender sensitivity were associated with more negative attitudes toward marriage and childbirth. This result is in the same vein as the following studies: a) a study that found that conservative attitudes toward gender roles in students university were associated with conservative views on marriage (Cho et al., 2020), and b) a study that found that the sexual attitudes of university students adversely affect their views of having children (Ju et al., 2013). Meanwhile, a study of unmarried adults in their 20s to 30s (including university students) also found that a more traditional perception of gender roles was associated with a more conservative perception of marriage (Choi and Chang, 2016).

The results of this study suggest that an increase in gender sensitivity may lead to decreases in the number of marriages and fertility rate. These results may relate to the significance of gender sensitivity. Gender sensitivity refers to the attitude and interest in trying to solve the problems of discrimination and inequality that arise in the real world due to genderbased biological and sociocultural differences (Park, 2018). In other words, gender sensitivity is inevitably linked to perceptions of gender equality, where the principles of gender equality assert that people should make decisions freely without being bound by marriage and childbirth (Jeon, 2021; Jeong and Lee, 2018; Lee et al., 2018).

Meanwhile, former studies predict that positive attitudes toward marriage and childbirth can lead to behavioral changes (Kim, 2013). Thus, to increase the number of marriages and the fertility rate despite the growing gender sensitivity, policies to promote positive attitudes toward marriage and childbirth should continue.

While current policies promoting marriage and childbirth focus on providing financial support and improving people's perceptions, they do not consider gender sensitivity. However, on the one hand, gender sensitivity is increasing naturally due to changes in the sociocultural environment. On the other hand, the general public, besides university students, tends to be less gender-sensitive because of differences in age or education, which necessitate national policies to promote gender sensitivity (Cho et al., 2020). Therefore, when developing policies to encourage marriage and childbirth, the possibility that increases in gender sensitivity harm both should be considered. Such changes may result from a societal transition that will continue until the elements of gender inequality disappear and until social gender sensitivity reaches a specific level. Previous studies revealed that gender egalitarianism contributes to higher fertility rates as it matures and its institutions settle (Arpino et al., 2015; Esping-Andersen and Billari, 2015; Goldscheider et al., 2015; Kim, 2016).

Among the questionnaire items on gender sensitivity, the items regarding gender roles and gender discrimination had a relatively high correlation with marriage attitudes. On the other hand, childbirth attitudes had a relatively low correlation with items related to gender roles and a relatively high correlation with items related to gender discrimination. These results suggest that although marriage can be a prerequisite to childbirth, it is not necessary. Therefore, to develop measures that will promote attitudes toward marriage and childbirth, the differences between specific factors of gender sensitivity should be taken into account.

The significance of this study lies in the fact that it points out a cause of decreasing number of marriages and fertility rate from a different perspective, i.e., the perspective of gender sensitivity. Also, this study will provide an empirical basis for comprehending university students' attitudes toward marriage and childbirth concerning gender sensitivity.

#### 5. Conclusion

In this study of university students, gender sensitivity was found to differ by gender, and the differences in gender sensitivity according to gender were found to have adverse effects on attitudes toward marriage and childbirth. Suggestions derived are as follows: First, university students' gender sensitivity and attitudes towards marriage and childbirth need to be promoted separately according to gender. Second, gender sensitivity should be considered in encouraging university students' positive attitudes toward marriage and childbirth. The adverse effect of gender sensitivity on the attitudes toward marriage and childbirth should be considered, though, which addresses the need for a policy-level approach to eliminate gender inequality overall. The significance of this study lies in revealing that in a society where gender sensitivity has yet to take root, Korea is an example, the number of marriages and the fertility rate can negatively correlate with gender sensitivity. Such negative correlation possibly being a byproduct of the transitional stage, this study suggested that the government should nevertheless maintain its policy efforts to enhance gender sensitivity. Another significance is that this study presented foundational data for future study. Suggestions for future research are as follows. Although this study identified a negative correlation between gender sensitivity and attitudes toward marriage and childbirth, determining the mechanism of this correlation was not within the scope of this study. Future research should determine the parameters or intervening variables applied when gender sensitivity affects attitudes toward marriage and childbirth. In addition, this process's specific mechanism must be revealed to determine the direction of policies promoting marriage and childbirth.

As the relationship revealed in this study may be a transition occurring while gender sensitivity evolves, continuous research must be carried out on gender sensitivity and attitudes toward marriage and childbirth.

The subjects of this study are limited to university students who were invited using a convenience sampling method. Thus, the results of this study have limitations in generalization. Research should continue with an expanded sample to make valid concluding generalizations. In addition, future research should perform a comparative analysis of the relationship between gender sensitivity and attitudes toward marriage and childbirth among generational groups (including subjects in their teens and 30s).

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#### **Compliance with ethical standards**

#### **Conflict of interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### References

- Anderson T and Kohler H (2013). Education fever and the East Asian fertility puzzle: A case study of low fertility in South Korea. Asian Population Studies, 9(2): 196-215. https://doi.org/10.1080/17441730.2013.797293 PMid:24883076 PMCid:PMC4038909
- Arpino B, Esping-Andersen G, and Pessin L (2015). How do changes in gender role attitudes towards female employment influence fertility? A macro-level analysis. European Sociological Review, 31(3): 370-382. https://doi.org/10.1093/esr/jcv002
- Auh SY and Kim JE (2013). Research on the evasion and willingness to marriage formation among the students in the national colleges of education. Journal of Korean Practical Arts Education, 26(3): 135-149.
- Bae HW (2017). The changing family values of Korean women and their policy implications. Health and Welfare Policy Forum, 251: 86-100.
- Brinton MC and Lee DJ (2016). Gender-role ideology, labor market institutions, and post-industrial fertility. Population and Development Review, 42(3): 405-433. https://doi.org/10.1111/padr.161
- Cho Y, Moon A, and Song A (2020). The effects of women's attitudes and social norms toward gender roles on fertility decision in low fertility countries. Journal of Critical Social Policy, 66: 175-211. https://doi.org/10.47042/ACSW.2020.02.66.175
- Cho YM and Lee J (2020). Study on the relationship between sexual knowledge, contraceptive attitude and gender susceptibility of nursing students. Journal of Digital Convergence, 18(9): 221-228. https://doi.org/10.5762/KAIS.2017.18.10.246
- Choi SY and Chang JK (2016). Influence of parenting style as perceived by adult child on perspective of marriage: The mediation effect of recognize gender roles. Family and Environment Research, 54(2): 181-195. https://doi.org/10.6115/fer.2016.015
- Do MH (2011). The effect of college students' awareness on marriage and childbirth to future marriage and childbirth. Korean Journal of Family Welfare, 16(4): 163-178.
- Esping-Andersen G and Billari FC (2015). Re-theorizing family demographics. Population and Development Review, 41(1): 1-31. https://doi.org/10.1111/j.1728-4457.2015.00024.x
- Goldscheider F, Bernhardt E, and Lappegård T (2015). The gender revolution: A framework for understanding changing family and demographic behavior. Population and Development Review, 41(2): 207-239. https://doi.org/10.1111/j.1728-4457.2015.00045.x

Hudde A (2018). Societal agreement on gender role attitudes and childlessness in 38 countries. European Journal of Population, 34(5): 745-767. https://doi.org/10.1007/s10680-017-9459-8 PMid:30976260 PMCid:PMC6261854

- Jeon M (2021). Development of the gender sensitivity tool for sexual violence education of student-athletes. Sports Science, 39(3): 2093-3363. https://doi.org/10.46394/ISS.39.3.1
- Jeong JW and Lee E (2018). Gender training to enhance university students' gender sensitivity-focusing on women's studies curriculum. Korean Journal of General Education, 12(5): 11-35.
- Joo KS, Lee JP, and Kim KM (2020). A study on the effect of sociality and self-esteem of college students on gender sensitivity. Journal of Learner-Centered Curriculum and Instruction, 20(6): 213-229. https://doi.org/10.22251/jlcci.2020.20.6.213

- Ju YH, Jung ES, and Shim MS (2013). The relationship of college students' value on marriage, children and sexual attitude. Journal of Digital Convergence, 11(9): 267-278.
- Kim HG (2013). The effect of population education on the recognition and attitude toward marriage and childbearing among college students. Journal of Korean Cultural Studies, 55: 233-256.
- Kim KS (2018). The effect of gender role attitude, self-esteem, career decision-making self-efficacy on marital perception of unmarried men and women. Journal of Wellness, 13(2): 289-299. https://doi.org/10.21097/ksw.2018.05.13.2.289
- Kim KS and Kim YA (2022). The effects of psychosocial maturity and sexual attitude, on gender sensitivity of nursing students. Journal of Next-Generation Convergence Technology Association, 6(2): 345-353. https://doi.org/10.33097/JNCTA.2022.06.02.345
- Kim SG (2021). Effects of gender sensitivity, sexual autonomy, sexual attitude and contact with internet pornography on sexual behavior in college students. Journal of the Korea Academia-Industrial Cooperation Society, 22(8): 268-278. https://doi.org/10.5762/KAIS.2021.22.8.268
- Kim SH, Leem GH, Sung HJ, Seong NK, Kim SH, Kim KS, and Lee SJ (2019). The influence of undergraduate students' gender sensitivity on the perception of sexual violence in positions of power imbalance. Korean Police Studies Review, 18(4): 3-36. https://doi.org/10.38084/2019.18.4.1
- Kim YM (2016). Fertility and gender equality: A multi-level analysis of 21 countries. Economy and Society, 112: 41-74. https://doi.org/10.18207/criso.2016.112.41
- Kwak YH and Jeong W (2018). The mediating effects of rejection sensitivity in the relationship between adolescents' experience of maltreatment and gender sensitivity. Journal of School Social Work, 44: 51-73. https://doi.org/10.20993/jSSW.44.3

- Lee H, Oh S, and Kim E (2018). A study on pre-service early childhood teachers' awareness of gender sensitivity. Journal of Korea Open Association for Early Childhood Education, 23(2): 169-194. https://doi.org/10.20437/KOAECE23-2-08
- Lee JY (2011). A study on developing gender sensitivity measurement. M.Sc. Thesis, Ewha University, Seoul, South Korea.
- Lee SY and Hong D (2014). The study on the idea of marriage and childbirth will of college students. Journal of Family Relations, 19(2): 3-28.
- Lindsay S, Rezai M, Kolne K, and Osten V (2019). Outcomes of gender-sensitivity educational interventions for healthcare providers: A systematic review. Health Education Journal, 78(8): 958-976. https://doi.org/10.1177/0017896919859908
- Mun JY (2020). The Effect of gender sensibility on dating violence risk perception in university students: Focusing on the mediation effect of self-efficiency. M.Sc. Thesis, Silla University, Busan, South Korea.
- Park HS (2018). A study on the effects of North Korean women defectors' gender equality consciousness focused on gender sensitivity, sexual harassment and sexual violence recognition. Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities, and Sociology, 8(2): 647-655.
- Seo EJ, Jeong SJ, Youn JJ, and Jeon RY (2020). The influence of personality and gender sensitivity in university students upon creativity. Journal of Learner-Centered Curriculum and Instruction, 20(12): 71-87. https://doi.org/10.22251/jlcci.2020.20.12.71
- Yang YM, Cho MO, and Baek KH (2021). The effects of sexual attitude and sexual knowledge of nursing students on gender sensitivity. Journal of Convergence for Information Technology, 11(6): 55-63. https://doi.org/10.22156/CS4SMB.2021.11.06.055