

# DETERMINANTS OF FERTILITY PREFERENCE AMONG WOMEN AGED 15-49 YEARS IN CENTRAL JAVA PROVINCE (2022 FAMILY LIFE SURVEY ANALYSIS)

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## ABSTRACT

Uncontrolled population growth is a significant challenge for societies and governments, particularly in the healthcare sector. Indonesia as the world's fourth most populous country, faces this issue with a Total Fertility Rate (TFR) of 2.45, falling short of the intended target of 2.1 for achieving balanced population growth. Furthermore, Central Java Province, one of the most populous regions, records a TFR of 2.27, which is also below the target. It's crucial to note that even a slight decrease in TFR in a populous province can have a significant impact on the national TFR. This research investigates the determinants of fertility preference among women aged 15-49 in Central Java Province, using 2022 Family Life Survey data from the National Population and Family Planning Board 2022. The results of bivariate analysis using the Chi-square test ( $\alpha=5\%$ ) indicate that fertility desires had a significant association with age at first marriage, education, occupation, and health insurance participation, but not related to contraceptive use. Multiple logistic regression ( $\alpha=5\%$ ) reveals that women of reproductive age who married at 21 or older (AOR=0.791; 95% CI: 0.786; 0.796) and employed women (AOR=0.798; 95% CI: 0.793;0.803) were less likely to desire more than two children. On the other hand, women with health insurance subscriptions were more likely to desire more than two children (AOR=1.129; 95% CI:1.121;1.137). These findings emphasize that promoting women's education and employment, enhancing adolescent reproductive health programs, and aligning healthcare and family planning policies are essential strategies to reshape fertility preferences among women of reproductive age in Indonesia.

**Keywords:** marriage age, employment status, health insurance, women of reproductive age, fertility preference

## ABSTRAK

*Pertumbuhan penduduk yang tidak terkendali merupakan tantangan besar bagi masyarakat dan pemerintah, terutama di sektor kesehatan. Indonesia, negara dengan jumlah penduduk terpadat keempat di dunia, menghadapi masalah ini, dengan Total Fertility Rate (TFR) tahun 2020 sebesar 2,45, masih jauh dari target ideal yaitu 2,1 untuk mencapai pertumbuhan penduduk yang seimbang. Selain itu, Provinsi Jawa Tengah sebagai salah satu daerah dengan penduduk terpadat, mencatat TFR 2,27 dan masih tidak sesuai target, padahal sedikit penurunan TFR di provinsi padat penduduk dapat memberikan dampak yang signifikan terhadap TFR nasional. Penelitian ini berupaya mengkaji faktor-faktor penentu preferensi fertilitas pada wanita usia 15-49 tahun di Provinsi Jawa Tengah menggunakan hasil Pemutakhiran Data Keluarga tahun 2022 dari Badan Kependudukan dan Keluarga*

*Berencana Nasional (BKKBN). Hasil analisis bivariat dengan uji chi-square ( $\alpha=5\%$ ) menunjukkan bahwa preferensi fertilitas memiliki hubungan yang signifikan dengan usia kawin pertama, pendidikan, pekerjaan, dan keikutsertaan dalam asuransi kesehatan, dan tidak berhubungan dengan penggunaan kontrasepsi. Analisis multivariate dengan regresi logistik ( $\alpha=5\%$ ) menunjukkan bahwa wanita yang menikah pada usia 21 tahun atau lebih (AOR = 0.791; 95% CI:0.786;0.796) dan wanita yang bekerja (AOR=0.798;95% CI:0.793;0.803) memiliki kemungkinan lebih kecil untuk menginginkan lebih dari dua anak. Di sisi lain, wanita ikut serta asuransi kesehatan lebih cenderung menginginkan lebih dari dua anak (AOR=1.129; 95% CI:1,121;1.137). Penelitian ini menekankan pentingnya meningkatkan pendidikan dan pekerjaan wanita, memperbaiki program kesehatan reproduksi remaja, serta menyelaraskan kebijakan asuransi kesehatan dan perencanaan keluarga untuk mengubah preferensi fertilitas di kalangan wanita usia subur di Indonesia.*

**Kata kunci:** *usia menikah, status pekerjaan, asuransi kesehatan, wanita usia subur, preferensi fertilitas*

## INTRODUCTION

The population growth resulting from high birth rates is a significant problem for both societies and individuals. Uncontrolled population growth leads to numerous disasters due to the increased pressure it puts on existing natural resources. Additionally, deforestation, climate change, a decline in ecosystem resilience, uncontrolled urbanization, food insecurity, increased energy demand, and damage to marine ecosystems are among the negative impacts of uncontrolled population growth (1). Many developing countries face various challenges in providing employment opportunities for their populations, while governments often lack the resources to meet the needs of public services and infrastructure (2).

The impact of high birth rates can reduce the time and resources parents can allocate for the development of each child at the family level. Furthermore, high birth rates hinder poverty alleviation efforts, as impoverished communities in developing countries tend to have larger families. Overall, this leads to a decline in public health due to the inability of healthcare facilities in developing countries to meet

the needs of a continuously increasing population (3)(4).

Families with many children achieve lower levels of education, as research indicates that high-fertility societies reduce the quality of education by decreasing the budget allocated per child. Additionally, in terms of maternal and child health, the risk of infant and toddler mortality is higher with higher birth rates and closely spaced births. Maternal mortality risk is also elevated with higher parity, while on the other hand, fertility decline reduces the risk of maternal death by decreasing the average number of pregnancies experienced by each woman (5).

The continuous growth of the population has led to an imbalance between the population size and the available resources, particularly in terms of food supply. This imbalance has resulted in significant health issues, notably malnutrition, and has harmed the overall productivity of the population (6). Implementing population control measures represents an investment towards attaining sustainable development goals. The government's investment in the family planning program serves as an effective

intervention in terms of financing, addressing both social and economic aspects. This effectiveness stems from the fact that each allocation of funding towards the family planning program contributes to a decrease in child and maternal mortality rates, in addition to generating environmental benefits. The resources originally designated for this program can be redirected to various other developmental sectors, spanning food, water, economic growth, and various healthcare domains. Research indicates that achieving universal access to contraception can have a lasting impact on the attainment of multiple Sustainable Development Goals (SDGs) indicators (7).

The population of Indonesia in 2022 was 275.8 million people, making it the fourth most populous country in the world (8). The large population of Indonesia is a result of high population growth due to historically high fertility rates. The average Indonesian woman in the 1960s had between 5 to 6 children during her reproductive years. Subsequently, the government began to realize the importance of reducing fertility rates and implemented policies to control population growth while enhancing socio-economic development in Indonesia. The decline in fertility rates in the 1980s reached 4.68, followed by a significant decrease in the 1990s to 2000, reaching 2.27. Unfortunately, fertility rates have stagnated since the year 2000, and the subsequent decreases have been insignificant (9). According to data from the Key Performance Indicator Report of Indonesia National Population and Family Planning Board in 2020, the total fertility rate (TFR) in Indonesia was 2.45.

Central Java Province, one of the major provinces in Indonesia, had a TFR of 2.27. The trend of TFR achievement in Central Java Province has been fluctuating, with it being at 2.46 in 2017, decreasing to 2.40 in 2018, further declining to 2.23 in

2019, but experiencing a slight increase to 2.27 in 2020 (10). This uncertain TFR trend indicates that the TFR in both Central Java Province and Indonesia is still far from the ideal target of 2.10 by 2024 (11). Therefore, there is a need for innovative and effective programs to reduce TFR and reach the main target.

Central Java has unique cultural values, including the culture of many children means many fortunes and the superiority of boys over girls. The results of qualitative research conducted in Central Java mentioned that families who have not had children with both male and female gender tend to want to add children and stop after getting six children. The reason they stop adding children is more due to economic problems (12). Therefore, it is necessary to further study the fertility preferences of women of childbearing age in Central Java Province.

Demographic evidence indicates that high fertility rates are driven by the desired number of children or the size of families. This presents a challenge for policymakers because when the desired number of children is high, family planning programs cannot operate optimally, as their goal is to help individuals plan their family size according to their preferences (13). An increase in the proportion of women desiring a higher number of children can lead to an increase in fertility rates in a country (14). Therefore, efforts to reduce fertility rates in Indonesia and achieve the population replacement level should focus on changing reproductive behavior among women of reproductive age (childbearing age). Literature studies indicate that there have been relatively few research efforts in Indonesia that analyze trends in the desired number of children among women of reproductive age and understand the factors influencing their desired family size.

The preferred number of children in Indonesia is higher than the TFR and is

influenced by socio-demographic factors (15). The elevated fertility preferences among women of reproductive age pose a challenge for government programs aimed at reducing TFR. This necessitates a comprehensive understanding of the factors related to the desired number of children among women of reproductive age, as their preferences can potentially impact the country's future TFR. Studies indicate that age, place of residence, educational level, and the number of living children all show significant associations with the desired number of children among young women (16). Similar research in North Sumatra Province demonstrates a significant correlation between place of residence and educational level to desired family size (17). Other research suggests that contraceptive use affects a woman's desired family size (18). Another influencing factor is a woman's age at first marriage (19). However, these studies overlook important factors such as employment status and health insurance enrollment, which could potentially influence women's preferences for their ideal family size.

The family planning program implemented by the Indonesian government encompasses a range of initiatives. These initiatives include promoting the maturity of marriage age and addressing adolescent reproductive health through a family planning program for youth (*Program Generasi Berencana/GenRe*). The program also involves preparations to foster high-quality families and the promotion of awareness and education on population-related issues. Furthermore, the government conducts public awareness campaigns to encourage contraceptive use, improves access to contraceptive and reproductive health services, and extends these services to underserved areas, border regions, islands, and impoverished urban areas. Additionally, the program places a strong emphasis on enhancing the quality of

contraceptive service providers and advocates for the cooperation of provincial and district/city governments (10). Despite these multifaceted interventions, it is unfortunate that the TFR has not yet reached the population replacement level. As a result, Indonesia continues to experience high population growth, and it remains among the top five most populous countries globally (8).

This research aims to examine factors related to the desired number of children among women of reproductive age in Central Java Province, which is one of the top three most populous provinces in Indonesia and exhibits uncertain fluctuations in TFR trends (8). The research was conducted using secondary data from the Family Life Survey in Central Java Province in 2022 to provide valuable insights for the development of more effective family planning and reproductive health policies.

## METHODS

This research was a non-reactive study that used secondary data from a family survey conducted by the National Population and Family Planning Board of Central Java Province in 2022. The targets of this survey were selected based on a sample framework and predetermined government-listed target families to represent the population. Research data have been validated by the sub-sector of data and information of the population and family planning agency of Central Java Province. The research respondents were women of reproductive age (childbearing age), aged 15 to 49, who were married and not currently pregnant, totaling 2,034,825 respondents.

The dependent variable was the preference for the "desired number of children" by the respondents, divided into two categories: "maximum of 2 children" and "more than 2 children." This variable

was calculated based on the 2022 Family Life Survey of women aged 15 to 49 who were asked in the Indonesian language, "How many children do you think would be an ideal number for you?". The answers were recorded as absolute numbers and were categorized as "a maximum of 2 children" if the answer was 0 to 2, and the category "more than 2 children" if the answer was more than 2. This categorization aligns with the government's program to achieve a Total Fertility Rate (TFR) of 2.1 to maintain a population replacement rate level (11).

The independent variables in the study included age at first marriage, education, occupation, health insurance participation, and current contraceptive use because the data are quite limited and these variables are closely related to fertility preferences. Age at first marriage was categorized as "before age 21" and "age 21 or older," by the National Population and Family Planning Board's recommendation for the ideal marriage age. Education was categorized as "educated" for respondents who have attended school at the primary, secondary, or tertiary levels, while "uneducated" represents respondents who have never attended school at all. Occupation was categorized as "employed" for respondents who do a certain job and get regular wages from their work while "unemployed" for respondents who are not working and get regular wages from their work.

Other independent variables were observed based on the conditions over the last 6 months. Health insurance enrollment was categorized as "enrolled" for respondents who subscribed to independent, private, or government health insurance during the last six months while "not enrolled" for respondents who did not subscribe to any health insurance during the last six months. Contraceptive use was categorized as "using" for respondents who

were still using contraception during the last six months up to the time of the interview, and "not using" for respondents who were not using contraception during the last six months up to the time of the interview.

### **Data Analysis**

Data analysis utilized frequency distributions for independent and dependent variables. Subsequently, bivariate analysis was conducted using a Chi-square test ( $\alpha = 5\%$ ) test to determine the relationship between independent and dependent variables. Furthermore, multivariate analysis using a logistic regression test ( $\alpha = 5\%$ ) was performed to identify determinants of the desired ideal number of children among women of reproductive age in Central Java. Data processing was carried out using International Business Machines Corporation Statistical Package for the Social Sciences (IBM SPSS) version 25 software, with significance set at  $p < 0.05$  and a confidence interval of 95%.

### **RESULTS**

The results of the frequency distribution show that more than a quarter of women of childbearing age in Central Java Province want more than two children even though the proportion of contraceptive use is 98%. Contraception aims to prevent unwanted pregnancies but will produce different outputs if couples of childbearing age do want many children, so contraceptive coverage is sometimes not in line with TFR output (16). The TFR rate in Central Java Province has not yet reached the target towards a balanced population growth. If this is not addressed immediately, it will have an impact on the increase in TFR in the coming years. The proportion of the age of first marriage in women of childbearing age in Central Java Province is quite equal between ages less than 21 years and 21 years and over, this

shows that the government's policy program in socializing the ideal marriage age for women has not been evenly distributed because there are still many Central Java women who marry before reaching the ideal age. This result can be seen in Table 1.

**Table 1** Frequency Distributions of Respondent Characteristic

<b>Background Characteristic</b>	<b>N</b>	<b>%</b>
<b>Desired Number of Children</b>	<b>2,034,825</b>	<b>100</b>
≤ 2	1,477,749	72.60
>2	557,076	27.40
<b>Age at first marriage</b>	<b>2,034,825</b>	<b>100</b>
< 21	1,036,507	50.90
≥ 21	998,318	49.10
<b>Education</b>	<b>2,034,825</b>	<b>100</b>
Uneducated	6,842	0.30
Educated	2,027,983	99.70
<b>Occupation</b>	<b>2,034,825</b>	<b>100</b>
Unemployed	901,656	44.30
Employed	1,133,169	55.70
<b>Health insurance enrollment</b>	<b>2,034,825</b>	<b>100</b>
Not enrolled	596,493	29.30
Enrolled	1,438,332	70.70
<b>Contraception use</b>	<b>2,034,825</b>	<b>100</b>
Using	1,993,152	98.00
Not using	41,673	2.00
<b>Total</b>	<b>2,034,825</b>	

**Source:** Chi-square test analysis of Central Java Family Life Survey

The distribution of education in Central Java Province is significantly high, as can be seen from the proportion of women of childbearing age who are educated reaching almost 100%. More than half of women of childbearing age in Central Java Province work and get regular income from their work, followed by health insurance coverage of 70.70% which shows the high public awareness of the importance of personal and family health and the importance of preparing for emergencies.

Bivariate analysis indicates that many socio-demographic and health factors consistently relate to the desired number of children among women of childbearing age ( $p < 0.05$ ). Table 2 shows that the highest

percentage of women of childbearing age desiring more than two children falls into the category of those who are not employed (29.90%), while the lowest percentage falls into the category of those who married at age 21 years old or older (25.10%). Looking at the first marriage age factor, the percentage of women desiring more than two children is higher in the category of those who married before the age of 21, at 29.60%, compared to 25.10% in the category of those who married at age 21 or older. This result is in line with a study in Ethiopia which showed that a woman's age at first marriage affects the desire to have more children and the desire to have more children decreases as a woman's age at first

marriage increases (20). Based on educational factors, the percentage of women desiring more than two children is higher in the category of those who are uneducated, at 28.50%, compared to 27.40%. Furthermore, in terms of employment status, the percentage of women desiring more than two children is higher in the category of those who are unemployed, at 29.90%, compared to 25.40%. Other studies in Ethiopia, Bangladesh, India, Nepal, Nigeria, and the East African regions indicate a higher likelihood of high-risk fertility among uneducated women. This is because educated women tend to desire fewer children and have better control over family planning, while uneducated women desire more children because they feel more physically capable of giving birth (20). On the other hand, there is a significant relationship between health insurance enrollment and the desired number of ideal children among women of childbearing age in Central Java Province, with a higher percentage of women desiring more than

two children in the category of "enrolled", at 28.00%, compared to "not enrolled" at 26.00% ( $p < 0.05$ ). People who have health insurance may feel more financially secure, especially when facing health risks associated with pregnancy and childbirth. This sense of security can encourage the desire to have more children. According to statistical analysis, contraceptive use is not significantly related to the desired number of ideal children among women of childbearing age ( $p > 0.05$ ). In line with the Brazilian study, there was no association between contraceptive use and an ideal number of children to have because, for most women, fertility preferences come before the decision to use contraception (21). Therefore, the independent variables, which are age at first marriage, education, occupation, and health insurance participation, are significantly related to the dependent variable, which is the desired ideal number of children among women of childbearing age in Central Java Province.

**Table 2** The Percentage of the Desired Number of Children among Women of Childbearing Age in Central Java Province Based on Socio-Demographic and Health Factors

Background Characteristic	Desired Number of Children				p value
	≤ 2		> 2		
	N	%	N	%	
<b>Age at first marriage</b>	<b>1,477,749</b>	72.60	557,076	27.40	
< 21	730,086	70.40	306,421	29.60	0.000
≥ 21	747,663	74.90	250,655	25.10	
<b>Education</b>	<b>1,477,749</b>	72.60	557,076	27.40	
Uneducated	4,893	71.50	1,949	28.50	0.039
Educated	1,472,856	72.60	555,127	27.40	
<b>Occupation</b>	<b>1,477,749</b>	72.60	557,076	27.40	
Unemployed	632,360	70.10	269,296	29.90	0.000
Employed	845,389	74.60	287,780	25.40	
<b>Health insurance enrollment</b>	<b>1,477,749</b>	72.60	557,076	27.40	
Not enrolled	441,573	74.00	154,920	26.00	0.000
Enrolled	1,036,176	72.00	402,156	28.00	
<b>Contraception use</b>	<b>1,477,749</b>	72.60	65,776	27.40	

Using	1,447,338	72.60	54,514	27.40	0.103
Not using	30,411	73.00	11,262	27.00	
<b>Total</b>					<b>2,034,825</b>

Source: Chi-square test analysis of Central Java Family Life Survey

Subsequently, a multivariate analysis was conducted to identify the determinants of the desired ideal number of children among women of reproductive age in Central Java Province using multiple

logistic regression analysis. The independent variables used were age at first marriage age, education, occupation, health insurance enrollment, and contraception use with the results displayed in Table 3.

**Table 3** Multivariate Logistic Regression Analysis to Examine the Determinants of Desired Ideal Number of Children among Women of Childbearing Age in Central Java Province, Stage 1 (N=2.034.825)

Background Characteristic	Desired Number of Children (>2)			
	B	OR	P Value	[95%CI]
<b>Age at first marriage</b>				
< 21		Reference Group		
≥ 21	-0,235	0,791	0,000	0,786 - 0,796
<b>Education</b>				
uneducated		Reference Group		
educated	-0,013	0,987	0,629	0,936 - 1,041
<b>Occupation</b>				
unemployed		Reference Group		
employed	-0,226	0,798	0,000	0,793 - 0,803
<b>Health insurance enrollment</b>				
not enrolled		Reference Group		
enrolled	0,121	1,129	0,000	1,121 - 1,137
<b>Contraception use</b>				
using		Reference Group		
not using	-0,012	0,988	0,267	0,966 - 1,010
Constant	-0,814	0,443	0,000	

Source: Logistic regression analysis of Central Java Family Life Survey

Multiple logistic regression analysis, stage 1, indicates that the education and contraception use variables do not have a significant impact on the desired ideal number of children among women of reproductive age in Central Java Province.

Therefore, this variable was excluded one by one from the model, and logistic regression testing was performed using the variables of age at first marriage, occupation, and health insurance enrollment.

**Table 4** Multivariate Logistic Regression Analysis to Examine the Determinants of Desired Ideal Number of Children among Women of Childbearing Age in Central Java Province (Last Stage) (N=2.034.825)

Background Characteristic	Desired Number of Children (>2)			
	B	OR	P Value	[95%CI]
<b>Age at first marriage</b>				



< 21		Reference Group		
≥ 21	-0,235	0,791	0,000	0,786 - 0,796
<b>Occupation</b>				
unemployed		Reference Group		
employed	-0,226	0,798	0,000	0,793 - 0,803
<b>Health insurance enrollment</b>				
not enrolled		Reference Group		
enrolled	0,121	1,,129	0,000	1,121 - 1,137
Constant	-0,827	0,437	0,000	

**Source:** Logistic regression analysis of Central Java Family Life Survey

The final stage indicates that age at first marriage, employment status, and health insurance enrollment significantly influence the preference for the ideal number of children among women of reproductive age in Central Java Province, as shown in Table 4.

The following formula was utilized for logistic regression in this study:

$$\pi(x) = \frac{\exp(\beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n)}{1 + \exp(\beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n)}$$

The equation of the logistic regression model utilized to predict fertility preferences among women of childbearing age in Central Java:

$$\pi(x) = \frac{\exp(-0,827 - 0,235a - 0,226o + 0,121hi)}{1 + \exp(-0,827 - 0,235a - 0,226o + 0,121hi)}$$

Notes:  $\alpha$  = age of first marriage

$o$  = occupation,

$hi$  = health insurance enrollment

The research indicates that women of childbearing age who married at age 21 or older were less likely to desire more than two children compared to women of childbearing age whose age at first marriage before 21 years old (AOR=0.791; 95% CI: 0.786; 0.796). Employed women of childbearing age were less likely to desire more than two children compared to women of childbearing age who were unemployed (AOR=0.798; 95% CI: 0.793; 0.803). Women of childbearing age who enrolled in health insurance subscriptions were more likely to desire more than two children compared to women of childbearing age who didn't enroll in health

insurance (AOR=1.129; 95% CI: 1.121; 1.137).

## DISCUSSION

This research aims to analyze the influence of individual and household factors on the desired number of children among women of reproductive age in Central Java Province. The study employs a multivariate logistic regression analysis model using data from a Family Life Survey conducted in Central Java Province in the year 2022 to gain a deeper understanding of factors related to fertility preferences among women of reproductive age in line with the latest conditions. This research contributes to the literature by examining unexplored factors, such as employment status and health insurance enrollment. The inclusion of individual factors that have the potential to influence the desired number of children among women of reproductive age can enhance a holistic understanding of the factors affecting reproductive decisions and behaviors in this demographic group.

The 2022 Family Life Survey indicates that women of reproductive age who consider the maximum ideal number of children to be two amount to 1,477,749 (72.6%), while a significant number, 557,076 (27.4%), believe that the ideal number of children exceeds two. In the last ten years, the population of Central Java has increased by 4.3 million people, which is of course inseparable from the many

families in Central Java who still want many children. In Central Javanese tradition, a large family is considered a blessing. Having many family members not only reflects prosperity and good fortune but also provides strong social support in old age. In large families, family members support each other in overcoming economic, social, and emotional difficulties (21).

Our analysis reveals that age at first marriage, education, occupation, and health insurance participation are significantly associated with the preference for the ideal number of children among women of childbearing age in Central Java Province. The findings of this research hold substantial implications for designing and refining family planning policies and future family development. Conversely, contraceptive usage does not demonstrate a significant association with the desired ideal number of children among women of childbearing age.

This study uncovers that many women of childbearing age in Indonesia still perceive the ideal number of children to be more than two, aligning with previous research (18). Women who marry below the ideal age (before the age of 21) exhibit a greater inclination toward desiring more than two children. This concurs with prior studies indicating a decline in the desired ideal number of children with an increase in the age of a woman's first marriage (19). This phenomenon arises because women marrying at a younger age possess a longer reproductive period, enabling them to desire more children. Moreover, an extended reproductive age heightens the likelihood of contraceptive failure (22). Typically, young married women have limited participation in family decision-making. The family decision including the desired number of children, is often dictated by husbands and other family members (23). Early family life must be meticulously prepared for, as

child development becomes the sole responsibility of parents. Additionally, pregnancies at a very young age entail elevated health risks (11). The consequences of early marriage encompass the risk of miscarriage, premature childbirth, low infant birth weight, congenital anomalies, susceptibility to infections, anemia, and even maternal mortality. Psychologically, early marriage leads to feelings of regret, frequently resulting in household disputes and arguments (24). Given these multifaceted risks, the research results indicate that women marrying early tend to desire more children, underscoring the necessity for government attention. While the current government policy aims to lower birth rates to achieve balanced population growth, there are limited policies addressing the desire for more children among young women and adolescents. Consequently, government intervention in the form of programs to prepare adolescents for family life, prevent early marriage, and enhance adolescent reproductive health programs is crucial to equip young women and adolescents with the knowledge and support needed to plan their ideal number of children.

The Central Java Provincial Government has an early marriage prevention program called "*Jo Kawin Bocah*," but it is unfortunate that the implementation of the program has only been implemented in part of the community movement and still needs to be increased in intensity. In addition, there are constraints related to funding and community stigma that are still very close to traditional culture related to early marriage. The less-than-optimal implementation of the program has an impact on the high rate of early marriage and is also related to the preference for the ideal number of children in Central Java Province (25).

This study also observes that education is significantly associated with the desired ideal number of children among women of childbearing age, although the influence in multivariate analysis is not highly significant in this study. This represents an empirical pattern observed in society. The findings align with previous research on factors related to the desire for more children in other developing countries, including Nigeria. Educated young women with education actively seek formal employment. They are acutely aware that combining work with childcare may be challenging, prompting a conscious decision to have fewer children. Moreover, the direct exposure to formal education requirements and sacrifices has deterred them from adhering to the norms of larger families (26). Women in the contemporary era aim to compete in life, which usually translates into a lower desire for children (27). Educated women have greater employment opportunities, dedicating most of their time to work, ultimately choosing fewer ideal children (16). This underscores that investing in women's education can support fertility rate reduction programs in Indonesia. The coverage of educated women of childbearing age in Central Java province is very high, almost 100%. However, this is not accompanied by a high coverage of knowledge about reproductive health and family planning. Previous research shows that almost 50% of adolescents and women of childbearing age in Central Java do not have good knowledge about reproductive health and family planning so many still have an ideal child preference of more than 2 (25).

Another significant factor influencing the desired ideal number of children is occupation. Married women sometimes find it challenging to balance numerous children with career aspirations, especially when pursuing certain managerial positions that do not allow for

extended maternity leave. Additionally, highly working mothers may encounter various disadvantages associated with high fertility. Similarly, working mothers tend to prefer fewer children due to the increased difficulty of caring for their children while holding a job (28). Working women are inclined toward having fewer children. This finding aligns with previous studies indicating that higher socioeconomic status is associated with a lower desire for children (29). This outcome can be discussed in the context of the wealth flow hypothesis proposed by Caldwell (28). It explains that in contemporary society, women and families in higher socioeconomic strata tend to perceive more children as an additional burden that strains their resources, including time. Conversely, women in lower socioeconomic strata may desire more children, considering it a rational economic decision as they view each child as an additional asset for security in old age (28).

Almost half of women of childbearing age in Central Java Province decide not to work after marriage because there is still a gender gap that prioritizes employment opportunities for men over women (30). A case study in a company in Central Java concluded that the rights of female workers such as discrimination protection, menstrual leave, lactation room facilities, and protection during overtime hours have not been optimally guaranteed. Thus, many women of childbearing age choose not to work, which has implications for the desire to have many children because they feel they have plenty of time to take care of their children without being disturbed by work problems (30).

The research findings indicate that women of childbearing age participating in health insurance have a greater inclination to desire more than two children. Subscribing to health insurance provides women with a sense of healthcare security

for themselves and their families, including their children. Health insurance assures healthcare maintenance and protection of basic healthcare needs provided to everyone who has paid health insurance contributions or whose contributions are paid by the central or local government. The prevailing national health insurance program in Indonesia is provided by the Social Health Insurance Administration Board (*Badan Penyelenggara Jaminan Sosial/BPJS Kesehatan*), which, by regulation, covers up to four children per family (31). If an employee has a fourth or subsequent family member, such as a fourth child, the additional contribution for that family member is 1% of the employee's salary. This 1% contribution is deducted directly from the employee's salary by the employer. Due to the simplicity and convenience offered, the concept of having more than two children becomes more socially acceptable. This aligns with American research showing that health insurance participation increases fertility rates by 1.60% to 2.30% (32).

Similarly, a study in Taiwan demonstrates that health insurance participation boosts fertility rates because people feel assured of primary healthcare and childbirth financing (33). Therefore, both national health insurance and health insurance policies support enhanced basic healthcare access for people across all demographics. Still, it is imperative to harmonize the policy regarding the number of children covered with family planning objectives, which advocate for a maximum of two children to achieve balanced population growth. Should health insurance limit coverage to a maximum of two children and impose higher contributions for the third and fourth child, it would affect family preferences in determining the ideal number of children.

Most of the people in Central Java Province are covered by national health

insurance. Targets related to equitable distribution of national health insurance benefit packages and targets related to equitable distribution of health facilities and health human resources have also been achieved (34). Support for health facilities and leniency regarding the number of children included in service recipients support community interest in having more children.

## **CONCLUSIONS AND SUGGESTIONS**

### **Conclusion**

In summary, uncontrolled population growth, especially in highly populous regions like Central Java Province, Indonesia, presents a significant challenge. This research, using 2022 data, examined factors influencing desired family size among women aged 15-49 in Central Java Province. Multivariate logistic regression revealed that factors such as age at first marriage, education, occupation, and health insurance enrollment significantly affect desired family size. Notably, women marrying at 21 or older were less likely to desire more than two children, while employed women were also less inclined to do so. Conversely, women with health insurance were more likely to desire more than two children. These findings highlight the social and health aspects of fertility preferences in Indonesia, emphasizing the need to adjust government policy design to be more effective and targeted.

### **Suggestion**

The varying preferences for the ideal number of children among women of childbearing age highlight the need for comprehensive interventions, including increasing women's access to education and employment opportunities, strengthening adolescent reproductive health programs, and aligning healthcare insurance policies with family planning objectives. These measures are crucial for addressing the high

birth rates in Indonesia effectively. Developing educational programs on family life and adolescent reproductive health within the school curriculum, involving community leaders, and promoting community engagement in family development programs are recommended approaches. This study provides valuable insights into understanding the reproductive behavior of women of childbearing age and can inform the development of more effective policies and programs to address the desire for more children among young women in Central Java Province, Indonesia.

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