



## Sociodemographic Factors Related To The Use Of Modern Contraception In Sleman Yogyakarta

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### Abstract

The coverage of the use of modern contraception in Sleman exceeded Indonesia's achievements in 2017-2019. It's vital to research sociodemographic factors that influence the use of modern contraception in Sleman as an example for other areas. The purpose of this research is to determine the relationship between sociodemographic factors with the recent contraception use. This study is an observational descriptive model using secondary data from HDSS Sleman. Bivariable analysis was carried out using the chi-square test and followed by multivariable analysis using logistic regression. The result showed that the proportion of modern contraceptive use is 54.1%. Sociodemographic factors that significantly related to the use of modern contraception were the husband's education and the number of children. Husbands with a high level of education (AOR = 0.56; 95% CI: 0.34-0.90) had a 44% lower chance of using modern contraception than husbands with low levels of education. Couples with  $\geq 2$  children (AOR = 4.29; 95% CI: 3.41-5.39) were 4.29 times more likely to use modern contraception than couples with 0-1 children. The conclusion is sociodemographic factors significantly related to the use of modern contraceptive methods are the husband's education and the number of children.

### Introduction

Indonesia is ranked fourth as the country with the highest population in the world after China, India, and the United States (WHO, 2020). In addition to the problem of high population density, the Maternal Mortality Rate (MMR) in Indonesia is still high. In 2015, MMR in Indonesia reached 305 per 100,000 live births (Kementerian Kesehatan Republik Indonesia, 2019). By 2030, this value must be reduced to less than 70 per 100,000 live births referring to the target of the Sustainable Development Goals (SDGs) (WHO, 2020). One of the efforts to overcome this problem, the Government of Indonesia, through the National Population and Family Planning Agency (BKKBN), launched a family planning (KB) program using the contraceptive method. Modern contraception, including sterilization,

pills, intrauterine devices (IUD), injections, implants, condoms, intravaginal/diaphragm, emergency contraception, and the lactation amenorrhoea method (MAL) are more desirable. They are considered more effective in preventing pregnancy (WHO, 2020). The use of modern contraception can reduce population density by decreasing birth rates. The use of contraception has also been shown to be significant in suppressing maternal and infant mortality by preventing unplanned pregnancies and spacing pregnancies at least two years after the previous birth (Gejo et al., 2019).

Sleman Regency is one of the regencies in the Special Region of Yogyakarta and is the district that contributes the highest number of couples of childbearing age in Yogyakarta (BKKBN, 2020). The high number of childbearing-age in Sleman, is followed by

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the advanced coverage of current contraceptive use. In 2017, 2018, and 2019, it was higher than the national coverage (Dinkes Sleman, 2020; Ministry of Health of the Republic of Indonesia, 2018, 2019, 2020). Based on the contraceptive use model compiled by Hall (2012), sociodemographic factors are among those that affect contraceptive use behavior. The existence of an appropriate approach to modifying sociodemographic factors to increase contraceptive use. Therefore, research on the factors affecting the use of modern contraception in couples of childbearing age in Sleman is vital. What factors affect the use of modern contraception by childbearing-age couples in Sleman. Later, the results obtained from this study can be used as a guide in designing programs to increase coverage of modern contraceptive use in other areas.

**Method**

This research is an analysis of secondary data from survey results conducted by the Health Demographic Surveillance System (HDSS) Sleman cycle four in 2018 and cycle five in 2019. It used an observational descriptive study with a cross-sectional research design to determine sociodemographic factors associated with behavior use of modern contraception

among couples of childbearing age and the proportion of modern contraceptive use among couples of childbearing age in Sleman Regency. The population of this study was couples of childbearing age (15-49 years) from HDSS Sleman data cycle 5, totaling 1981 couples. However, due to missing data (n=1), respondents answered “don’t know” to questions regarding contraceptive use (n=149), wife’s education (n=8), husband’s education (n=9), and husband’s occupation (n=8). = 1), then the subjects of this study were 1813 couples of childbearing age (15-49 years) whose data were recorded in the Sleman HDSS data cycle 5 and had data regarding socioeconomic status taken in the Sleman HDSS survey cycle 4. The flow of sample selection used in this study is depicted in Image 1. Data analysis carried out, was to find the proportion of modern contraceptive methods used by couples of childbearing age, univariable analysis to present data in the form of frequency tables to determine the frequency/ amount and percentage of data from each code for each dependent and independent variable, bivariable analysis performed is the chi-square test method. Independent variables with p <0.25 in the bivariable analysis were then included in the multivariable analysis using the logistic regression method.

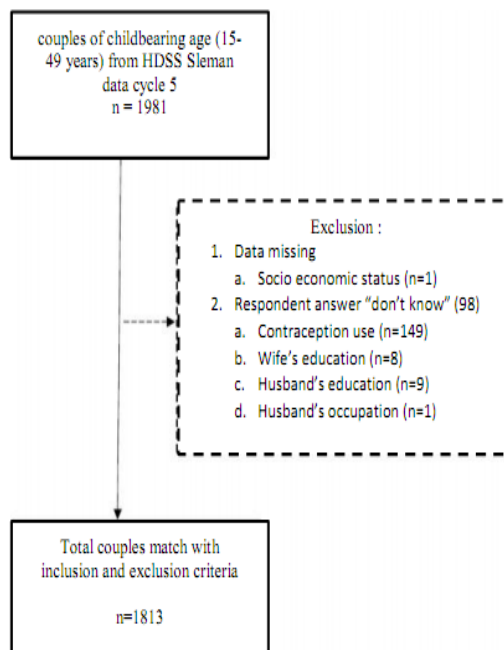


Image 1. Sample Selection Flow

## Result And Discussion

Most of the husband subjects were in the age group of 35-49 years (76.6%), had a secondary education level (SLTP/MTS, and SLTA/SMK/MA) of 72.3% and were in employment status (98.2%) ( Table 1). While most of the wife subjects were in the age group of 35-49 years (65.3%), had a secondary

education level (SLTP/MTS, and SLTA/SMK/MA) of 70.5% and were in employment status (50.6%) (Table 1). The results of the analysis also showed that the majority of respondents embraced Islam (94.9%), lived in urban areas (84.2%), were in upper-middle socioeconomic status (42.4%), and most of them had  $\geq 2$  children (62.4%) (Table 1).

Table 1. Sociodemographic Characteristics of Research Subject

Variables	Total	%
<b>Husband's Age</b>		
15-24	46	2,5%
25-34	379	20,9%
35-49	1,388	76,6%
<b>Wife's Age</b>		
15-24	112	6,2%
25-34	517	28,5%
35-49	1,184	65,3%
<b>Religion</b>		
Non Moslem	79	4,3%
Moslem	1,720	94,9%
Cross religion	14	0,8%
<b>Husband's Education</b>		
Elementary	167	9,2%
Middle	1311	72,3%
High	335	18,5%
<b>Wife's Education</b>		
Elementary	164	9,1%
Middle	1,279	70,5%
High	370	20,4%
<b>Husband's Occupation</b>		
Unemployment	32	1,8%
Working	1,781	98,2%
<b>Wife's Occupation</b>		
Unemployment	895	49,4%
Working	918	50,6%
<b>Residential Location</b>		
Rural	286	15,8%
Urban	1,527	84,2%
<b>Socioeconomic Status</b>		
Middle Low	643	35,5%
Middle	402	22,2%
Middle High	768	42,4%
<b>Number of Children</b>		
0-1 Child	681	37,6%
$\geq 2$ Children	1,132	62,4%
Total (n)	1,813	

Source : HDSS Sleman Data Cycle 4 in 2018 and Cycle 5 in 2019, processed

The description of contraceptive use by the 1813 couples of childbearing age who were

respondents to this study is described in Table 2 below.

Table 2. Description of Contraception Use by Couples of Childbearing Age

Variables	Total	%
a. Using Modern Contraception	980	54,1%
a. Do Not Use Modern Contraception	833	45,9%
- Do not use modern or traditional contraception	748	41,2%
- Use traditional contraception	85	4,7%
Total (n)	1,813	

Source : HDSS Sleman Data Cycle 4 in 2018 and Cycle 5 in 2019, processed

Table 3. Bivariable and Multivariable Analysis of Independent Variables on the Use of Modern Contraception

Variables	Bivariable Analysis		Multivariable Analysis	
	COR (95% CI)	P-value	AOR (95% CI)	P-value
<b>Husband's Age</b>				
15-24 years	<b>1</b>		<b>1</b>	
25-34 years	0,89 (0,48-1,64)	0,707	0,80 (0,38-1,68)	0,553
35-49 years	1,61 (0,89-2,90)	0,116	0,98 (0,44-2,15)	0,954
<b>Wife's Age</b>				
15-24 years	<b>1</b>		<b>1</b>	
25-34 years	1,43 (0,94-2,16)	0,091	0,92 (0,54-1,56)	0,745
35-49 years	1,91 (1,29-2,83)	0,001**	0,73 (0,41-1,30)	0,283
<b>Religion</b>				
Non Moslem	<b>1</b>		<b>1</b>	
Moslem	1,60 (1,02-2,53)	0,042*	1,42 (0,87-2,32)	0,162
Cross Religion	0,53 (0,15-1,83)	0,316	0,49 (0,13-1,89)	0,303
<b>Husband's Education</b>				
Elementary	<b>1</b>		<b>1</b>	
Middle	0,85 (0,61-1,18)	0,331	0,91 (0,62-1,32)	0,604
High	0,46 (0,31-0,67)	0,000***	0,56 (0,34-0,90)	0,018*
<b>Wife's Education</b>				
Elementary	<b>1</b>		<b>1</b>	
Middle	0,90 (0,65-1,25)	0,524	1,12 (0,77-1,63)	0,546
High	0,53 (0,36-0,76)	0,001**	0,88 (0,55-1,41)	0,597
<b>Husband's Occupation</b>				
Unemployment	<b>1</b>		<b>1</b>	
Working	1,18 (0,59-2,37)	0,643		
<b>Wife's Occupation</b>				
Unemployment	<b>1</b>		<b>1</b>	
Working	0,84 (0,69-1,01)	0,057	1,01 (0,83-1,24)	0,910
<b>Location</b>				
Rural	<b>1</b>		<b>1</b>	
Urban	0,93 (0,72-1,20)	0,569		
<b>Economic Status</b>				
Middle Low	<b>1</b>		<b>1</b>	
Middle	0,86 (0,67-1,10)	0,227	0,81 (0,62-1,06)	0,130
Middle High	0,78 (0,63-0,96)	0,019*	0,88 (0,68-1,14)	0,322
<b>Number of Children</b>				
0-1 Child	<b>1</b>		<b>1</b>	
≥2 Children	3,97 (3,25-4,86)	0,000***	4,29 (3,41-5,39)	0,000***

Source : HDSS Sleman Data Cycle 4 in 2018 and Cycle 5 in 2019, processed

Of the 1,813 couples of childbearing age who met the inclusion and exclusion criteria to become respondents in this study, only 980 (54.1%) used modern contraception. A total of 833 couples (45.9%) did not use modern contraception. Of the 833 couples who did not use modern contraception, 748 did not use either modern or traditional contraception (41.2%), and 85 only used traditional contraception (4.7%).

The results of the analysis in this study showed that the husband's education level was high (AOR=0.56, 95% CI=0.34-0.90,  $p=0.018$ ) and the number of children  $\geq 2$  (AOR=4.29, 95% CI =3.41-5.39,  $p=0.000$ ) was proven to significantly influence the use of modern contraception among couples of childbearing age in Sleman Regency (Table 3). The analysis shows evidence that the number of children has a very significant relationship with modern contraception use. The group of couples with  $\geq 2$  children has the possibility of using modern contraception 4.29 times higher than the group with 0-1 child. Research by Kogay & Itua (2017) also proves that the number of children has a significant relationship with the use of modern contraception, and groups with children 2, 3, and  $\geq 4$  have the possibility of using modern contraception are 1.93, 3.53, and 2.95 times higher than the group with 0-1 child. The same result was in a study by Irawaty (2021), which showed couples with many children have a greater tendency to use modern contraception. Research by Wilopo et al. (2017) using data from the 2001-2012 Indonesia Demographic and Health Surveys (IDHS) and the 2015 PMA-2020 survey found that the use of contraception as a means of limiting the number of births tends to be used more widely than the use of contraception. as a means to regulate the spacing of births (spacing). Thus, Indonesian people with children  $\geq 2$  have a greater tendency to use modern contraception.

The analysis shows that the husband's education has a significant relationship with the use of modern contraception. Of the 3 existing education groups, the group of husbands with low levels of education (never attended school or SD/MI) is the group with the highest probability of using modern contraception. These results were also obtained

in a study conducted by Seidu et al. (2020). While on the wife's education variable, the analysis shows that the wife's education has no significant relationship with the use of modern contraception. Of the 3 existing education groups, the group of wives with a secondary level of education is the group with the highest probability of using modern contraception. This result is in line with the results of a study conducted by Seidu et al. (2020) and Sserwanja et al. (2021). The results show that the husband group with a low education and the wife group with a secondary education level have a higher chance of using modern contraception. It is due to the husband group with a low education and the wife group with a secondary education level are the groups with a proportion of the number of children  $\geq 2$ . As much as 65.9% of the husband group with a low education level and 61.7% of the wife group with a secondary education level already have children totaling  $\geq 2$ .

The results show that the age of the husband and wife has no significant relationship with modern contraception use. Based on multivariable analysis, husbands and wives in the age group of 15-24 years have the highest opportunity to use modern contraception compared to the other two age groups. These results are in line with research conducted by Kogay & Itua (2017), Çalikoğlu et al. (2018), Seidu et al. (2020), and Mahande et al. (2020). The tendency to use modern contraception, which decreases with age, can be attributed to the belief of married couples that with increasing age, fertility rates will decrease because women will enter menopause. Not only in Sleman, Indonesia, this trend is also found in other countries such as Australia (Harris Id et al., 2021).

In the variable of religious beliefs held by couples of childbearing age, the analysis shows that this variable has no significant relationship with modern contraception use. Couples who adhere to Islamic religious beliefs have a 1.42 times greater chance of using modern contraception than those who adhere to non-Islamic religious beliefs. The results are in line with research by Mahande et al. (2020) and Namasivayam et al. (2020). This result can occur because 94.9% of the subjects in this study

adhere to Islamic religious beliefs, and 62% of subjects who adhere to Islam already have  $\geq 2$  children. As is known from the analysis results, the number of children, especially the number of children  $\geq 2$ , is a variable that positively and significantly influences modern contraception use. In addition, there is evidence showing that Indonesians have a higher tendency to use contraception as a means of limiting the number of births.

The results show that the employment status of husband and wife has no significant relationship with modern contraception use. The working husband group has a 1.18 times greater chance of using modern contraception than the non-working husband group. Wife's employment status variable found that working wives are 1.01 times more likely to use modern contraception than non-working wives. These results are in line with research conducted by Khan et al. (2018), Bolarinwa et al. (2021), and Hailegebreal et al. (2021). Couples who work will tend to use modern contraception. It can happen because, with modern contraception use, they will have control over when to have children. So, pregnancy will not interfere with the careers of married couples (McDougal et al., 2021).

Location of residence has no significant relationship with the use of modern contraception. Couples who live in villages have a higher tendency to use modern contraception than those who live in cities. Research by Kogay & Itua (2017) and Hailegebreal et al. (2021) also found similar results. Socioeconomic status also has no significant relationship with the use of modern contraception. Groups with lower middle socioeconomic status have a greater tendency to use modern contraception than middle and upper middle socioeconomic status. Same with the research conducted by Kogay & Itua (2017). The results show that groups living in villages and those with middle-low economic status have a greater chance of using modern contraception because most subjects living in villages and those with lower-middle economic status have a low education level than their husbands. As previously explained, the husband's education level is an independent variable with a significant effect on the use of modern contraception. Most groups with low

levels of husband's education already had  $\geq 2$  children. There is a fact that Indonesian people tend to use contraception to limit or reduce the number of children to be born so that more contraceptive use will be found in couples who have had children before ( $\geq 2$  children) (Wilopo et al., 2017). Thus, the tendency to use modern contraception is more common among people living in villages and those with low socioeconomic status.

A family planning program called Family Advancement for Life and Health (FALAH) in Pakistan shows that setting birth spacing as the primary goal of family planning programs can provide better results. It increases maternal and child health better than limiting family size (limiting birth control) (Naz & Acharya, 2021). This study indicates that contraceptive use is still dominated by couples with  $\geq 2$  children. The results of a study by Wilopo et al. (2017) and another one by Naz & Acharya (2021) can be used as a basis for starting to design and improve education and promotion programs regarding the use of modern contraception as a means of spacing births (spacing) starting with couples who still have 0-1 child.

## Conclusion

The factor of the number of children, especially the group with children  $\geq 2$  (AOR=4.29, 95% CI=3.41-5.39) and husband's education, especially the group with a low level of education (AOR=0.56, 95% CI=0.34-0.90), which is the group with the highest proportion of children  $\geq 2$  compared to the other two groups with the husband's education level, is a sociodemographic factor with a significant relationship with modern contraception use in Sleman Regency. Meanwhile, the factors of husband's and wife's age, religion, wife's education, husband's and wife's occupation, location of residence, and socioeconomic status have no significant relationship with the use of modern contraception by couples of childbearing age in Sleman.

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