

Factors Related to the Choice of Contraceptive Methods among the Poor in Indonesia

Agung Dwi Laksono¹, Ratu Matahari², *Ratna Dwi Wulandari³

¹National Institute of Health Research and Development, Indonesia Ministry of Health, Jakarta, Indonesia.

²Faculty of Public Health, Ahmad Dahlan University, Yogyakarta, Indonesia.

³Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia.

*Corresponding Author: Ratna Dwi Wulandari

Email: ratna-d-w@fkm.unair.ac.id

ABSTRACT

The poor are vulnerable groups that will continue to wallow in poverty if they are not assisted by family planning programs. This study was aimed at analyzing factors related to the choice of contraceptive methods in the poor in Indonesia. The study employed data from the 2017IDHS. The unit of analysis in this study was 23,733 poor women who used contraception. Multinomial logistic regression was used at the final stage of the analysis. The results show that poor women living in urban areas are 0.828 times more likely to use SARC. Meanwhile, the poor women who live in urban areas have a probability of 0.884 times to use LARC. All age groups were more likely to use SARC and LARC than the 15-19 age group. All education levels have a higher probability of using SARC and LARC than no education. Employed women are 0.860 times more likely than unemployed women to use LARC. Married women are 36,608 times more likely than single women to use LARC. Meanwhile, multiparous and grand multiparous have a higher probability of using SARC. Otherwise, multiparous women have a lower chance of using LARC. Insured women were 0.730 more likely than uninsured women to use LARC. It was concluded that 7 factors related to the choice of contraceptive methods in the poor in Indonesia. The seven factors are the type of place of residence, age group, education level, employment status, marital status, parity, and health insurance.

Keywords: Contraceptive use, the poor, childbearing age, contraceptive methods, family planning, Indonesia.

Correspondence:

Ratna Dwi Wulandari

Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia.

Email: ratna-d-w@fkm.unair.ac.id

BACKGROUND

Indonesia is the fourth most populous country in the world. This figure is based on data from the World Population in 2019, with a population of 27 million¹. The increasing population has prompted the government of the Republic of Indonesia to set population policies through the National Family Planning Coordinating Board. At the global level, contraceptive use has shown an increasing trend in the last 25 years, namely 9% (in 1990 it was 51% to 60% in 2015). This situation has reached the minimum target of contraceptive use prevalence, which is 50%². What about contraceptive use in Indonesia? Based on data from the United Nation in 2020, it shows that the proportion of contraceptive use in Asia reaches 66.4%, Southeast Asia 63.6%. The use of contraception in Indonesia (61.6%) is lower when compared to Thailand (78.4%), Vietnam (76.7%), and Singapore (66.3%)². The family planning program is one of the effective solutions to overcome population problems, namely reducing maternal and infant mortality rates^{3,4}. The use of contraceptive methods is an action to prevent unwanted pregnancies, unsafe abortion, and reduce the number of risky pregnancies, namely: pregnancy at age less than 18 years, pregnancy at age more than 35 years, pregnancy distance is too close (less than 2 years), and pregnancy too often (more than 3 children) which has an impact on increasing the degree of maternal health^{5,6}, so that the use of contraception is undoubtedly beneficial for reducing health costs associated with maternal health⁷. However, the prevalence of contraceptive use in Indonesia is still low. Based on data from the Ministry of Health, it shows that 59.3% of women aged 15-49 years use modern contraceptives, 0.4% use traditional contraceptives, 24.7% have used contraception at least once, and 15.5% have never used contraception⁸.

Indonesia is a developing country that is still struggling with poverty. The poor are a group that is vulnerable to not being able to access contraceptive services^{9,10}. A study in Malawi explained that the use of modern contraceptive methods is influenced by a person's degree of wealth. A person with a high wealth quintile has a higher prevalence of contraceptive use than someone in a low wealth quintile⁹. Another interesting situation is that the incidence of unmet need is higher in the middle to lower socioeconomic groups than in the upper-middle socioeconomic groups⁷. Unmet need is an important factor in population programs. Many women of childbearing age do not want to have children again or delay pregnancy but do not use contraception¹¹. The number of unmet needs globally reaches 222 million women in poor countries in the world⁴, while the number of unmet needs in Indonesia based on data from the 2017 Indonesian Demographics Population Survey (IDHS) reached 10.6%¹². Unmet need is influenced by several factors including fear of contraceptive side effects, social norms (including religion and belief), and social acceptance (partner support)¹³. This is similar to a study on urban poor in Pakistan which explains that the husband's support has an important role in the decision to use contraception¹⁴. Several studies related to the factors that influence contraceptive use in several countries have been carried out, including in Indonesia, however, the results obtained are still varied. A study in Indonesia explains that the choice of contraception is influenced by age, the number of children, education level, wealth level, and access to information¹⁵. Studies in Sub-Saharan Africa explain that it is difficult for the poor to get long-acting reversible contraceptive (LARC) so that they use more traditional types of contraception which have a high failure rate if not done properly¹⁶. This situation is also consistent with perceptions of contraception from the supply side that

prioritizes income and geographic factors to access family planning services. Meanwhile, from the demand side, it is closely related to sociocultural factors, so that the majority of the poor think that children are an economic asset so that they will be very happy to have a large number of children¹⁷⁻¹⁹. Based on the background description, this research is aimed at analyzing factors related to the choice of contraceptive method among the poor in Indonesia.

RESEARCH METHODS

Data Source

The study employed secondary data from the 2017 Indonesian Demographic Data Survey (IDHS) as a material analysis. The unit of analysis in this study was poor women aged 15-49 years old who admitted to using contraception. By using the stratification and multistage random sampling, a sample of 23,733 respondents was obtained. The poor were determined based on wealth status. Wealth status was based on the wealth quintile owned by a household. Households were scored based on the numbers and types of items they had, from televisions to bicycles or cars, and housing characteristics, such as drinking water sources, toilet facilities, and main building materials for the floor of the house. This score was calculated using principal component analysis. National wealth quintiles were arranged based on household scores for each person in the household and then divided by the distribution into the same five categories, with each accounting for 20% of the population, namely quintile 1 (poorest), quintile 2 (poorer), quintile 3 (middle), quintile 4 (richer), and quintile 5 (richest)²⁰. The poor are respondents who fall into the quintile category 1 and 2 (the poorest and the poor).

Procedure

Ethical clearance has been obtained by the 2017 IDHS from the National Institute of Health Research and Development, the Indonesian Ministry of Health. The respondents' identities have all been deleted from the dataset. Respondents have provided written approval for their involvement in the study. Through the website: <https://dhsprogram.com/data/new-user-registration.cfm> the researcher has obtained permission to use the data for this study.

Data Analysis

The contraceptive methods were the respondent's acknowledgment of the use of contraceptive type. Contraceptive methods are divided into 3 categories, namely traditional methods, short-acting reversible contraceptive (SARC), and long-acting reversible contraceptive (LARC). Traditional methods consist of periodic abstinence, withdrawal, other traditional,

prolonged abstinence, lactational amenorrhea. Short-term contraceptive methods consist of pills, injection of 1 month & 3 months, male condom, female condom, diaphragm, foam or jelly, emerging contraception, other modern methods, and standard day method. Meanwhile, LARC consists of IUD, female & male sterilization, implants/Norplant.

Other variables analyzed as independent variables were the type of place of residence, age group, education level, employment status, marital status, parity, and health insurance. The type of place of residence was divided into 2 categories, namely urban and rural, based on the classification from the Central Bureau of Statistics. Age was the respondent's acknowledgment of the last birthday that has passed. The age group is divided into 7 categories, namely 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49. The education level was divided into 4 levels, namely no education, primary, secondary, and higher. Employment status was divided into 2 categories, namely unemployed and employed. Marital status was divided into 2 categories, namely never in union and divorced/widowed. Parity was a live-born baby who has been born. Parity was divided into 3 categories, namely primiparous (0-1), multiparous (2-4), and grand multiparous (> 4). Finally, health insurance is divided into 2 categories, namely uninsured and insured.

The initial stage was carried out by bivariate analysis using the chi-square test to examine the relationship between the independent variable and the contraceptive type choice as the dependent variable. The second stage was a multivariate test using binary logistic regression to determine the factors associated with the contraceptive type chosen by the poor. SPSS 21 software was used for all stages of statistical analysis.

RESULTS AND DISCUSSION

Table 1 shows descriptive statistics of contraceptive methods choice among the poor in Indonesia. All contraceptive methods categories are dominated by poor women who live in rural areas. Based on the age group, the poor women who use traditional methods are predominantly the 45-49 age group. The poor women using SARC were predominantly in the 35-39 age group. Meanwhile, poor women who use LARC are dominated by the 40-44 age group.

Based on the education level, all contraceptive methods categories are dominated by poor women who have primary education. The entire contraceptive type category is dominated by employed and married women. Table 1 also informs that multiparous and insured women dominate all contraceptive methods categories.

Table 1. Descriptive statistics of contraceptive methods choice among the poor in Indonesia (n=23,733)

Variables	Contraceptive Methods						P
	Traditional		SARC		LARC		
	n	%	n	%	n	%	
Type of place of residence							0.000***
• Urban	684	29.3%	4035	25.4%	1459	26.4%	
• Rural	1652	70.7%	11834	74.6%	4069	73.6%	
Age group							0.000***
• 15-19	7	0.3%	147	0.9%	20	0.4%	
• 20-24	86	3.7%	1037	6.5%	166	3.0%	
• 25-29	199	8.5%	2038	12.8%	473	8.6%	
• 30-34	267	11.4%	3445	21.7%	876	15.8%	
• 35-39	511	21.9%	3986	25.1%	1414	25.6%	

• 40-44	621	26.6%	3308	20.8%	1591	28.8%	
• 45-49	645	27.6%	1908	12.0%	988	17.9%	
Education level							0.000***
• No education	125	5.4%	543	3.4%	232	4.2%	
• Primary	1052	45.0%	8496	53.5%	2750	49.7%	
• Secondary	1031	44.1%	6393	40.3%	2355	42.6%	
• Higher	128	5.5%	437	2.8%	191	3.5%	
Employment status							0.000***
• Unemployed	912	39.1%	6851	43.2%	2047	37.0%	
• Employed	1419	60.9%	8992	56.8%	3481	63.0%	
Marital status							0.000***
• Never in union/ Widowed/divorced	1	0.0%	30	0.2%	80	1.4%	
• Married/living with partner	2335	100.0%	15839	99.8%	5448	98.6%	
Parity							0.000***
• Primiparous	134	5.7%	1501	9.5%	234	4.2%	
• Multiparous	1276	54.6%	11063	69.7%	3214	58.1%	
• Grand multiparous	926	39.6%	3305	20.8%	2080	37.6%	
Health insurance							0.000***
• Uninsured	798	34.2%	6241	39.3%	1550	28.0%	
• Insured	1538	65.8%	9627	60.7%	3978	72.0%	

Note: *p < 0.05; **p < 0.01; ***p < 0.001.

Table 2 shows the results of the multinomial logistic regression of contraceptive methods choice among the poor in Indonesia. For reference, it was "traditional methods". The analysis showed that poor women living in

urban areas are 0.828 times more likely to use SARC (OR 0.828; 95% CI 0.750-0.915). Meanwhile, the poor women who live in urban areas have a probability of 0.884 times to use LARC (OR 0.884; 95% CI 0.792-0.986).

Table 2. The results of multinomial logistic regression of contraceptive methods choice among the poor in Indonesia (n=23,733)

Predictor	SARC			LARC		
	OR	LB	UB	OR	LB	UB
Type of place: Urban	-	-	-	-	-	-
Type of place: Rural	***0.828	0.750	0.915	*0.884	0.792	0.986
Age group: 15-19	-	-	-	-	-	-
Age group: 20-24	***5.999	2.722	13.224	*2.800	1.140	6.877
Age group: 25-29	***3.611	2.745	4.749	***1.769	1.287	2.431
Age group: 30-34	***3.051	2.527	3.684	***1.910	1.546	2.361
Age group: 35-39	***3.989	3.393	4.689	***2.388	1.998	2.854
Age group: 40-44	***2.538	2.225	2.896	***1.921	1.662	2.220
Age group: 45-49	***1.809	1.596	2.051	***1.706	1.488	1.956
Education: No education	-	-	-	-	-	-
Education: Primary	***2.825	2.108	3.785	**1.571	1.136	2.173
Education: Secondary	***3.899	3.136	4.849	***2.070	1.623	2.642
Education: Higher	***2.385	1.923	2.957	***1.734	1.362	2.207
Employment: Unemployed	-	-	-	-	-	-
Employment: Employed	0.938	0.854	1.031	**0.860	0.775	0.954
Marital: Never in union Widowed/divorced	-	-	-	-	-	-
Marital: Married/living with partner	4.548	0.617	33.532	***36.608	5.084	263.583
Parity: Primiparous	-	-	-	-	-	-
Parity: Multiparous	***2.141	1.690	2.711	*0.753	0.572	0.991
Parity: Grand multiparous	***2.009	1.814	2.224	1.065	0.954	1.190
Health insurance: Uninsured	-	-	-	-	-	-
Health insurance: Insured	1.086	0.989	1.194	***0.730	0.657	0.812

Note: *p < 0.05; **p < 0.01; ***p < 0.001.

The results of the analysis show that poor women who live in urban areas have a higher probability of using SARC and LARC than traditional methods. This situation is inseparable from urban areas that have better access to health care facilities²¹. This phenomenon is not only found in Indonesia but also occurs in several other countries²²⁻²⁴.

Based on the age group, all age groups were more likely to use SARC and LARC than the 15-19 age group. The poor women in the 20-24 age group were 5.999 times more likely than the poor women in the 15-19 age group to use SARC (OR 5.999; 95% CI 1.722-13.224). The poor women in the 20-24 age group were 2.800 times more likely than the poor women in the 15-19 age group to use LARC (OR 2.800; 95% CI 1.140-6.877). The poor women in the 45-49 age group were 1.809 times more likely than the poor women in the 15-19 age group to use SARC (OR 1.809; 95% CI 1.596-2.051). The poor women in the 45-49 age group were 1.706 times more likely than the poor women in the 15-19 age group to use SARC (OR 1.706; 95% CI 1.48801,956). Age as a determinant of modern contraceptive use was also reported in previous studies^{25,26}. As they get older, women are more likely to use modern contraceptives that are effective in the long term²⁷.

Table 2 informs that all education levels have a higher probability of using SARC and LARC than no education. The poor women with primary education were 2.825 times more likely than no education poor women to use SARC (OR 2.825; 95% CI 2.108-3.785). The poor women with primary education were 1.571 times more likely than no education poor women to use LARC (OR 1.571; 95% CI 1.136-2.173). The poor women with higher education were 2.385 times more likely than no education poor women to use SARC (OR 2.385; 95% CI 1.923-2.957). The poor women with higher education are 1.734 times more likely than no education poor women to use LARC (OR 1.734; 95% CI 1.362-2.207).

These findings are similar to research in Northwest Ethiopia, Nigeria, and India which explains the level of education of respondents as a predictor of the use of contraception²⁸⁻³⁰. The results of this analysis indicate that a better level of education makes women better understand better choices for themselves^{31,32}. Previous studies also provide similar findings, that the better the education level of a woman, the better the output in the health sector is achieved^{33,34}. Otherwise, poor education is a barrier to achieving higher quality output in the health sector^{35,36}.

Table 2 shows that employed women are 0.860 times more likely than unemployed women to use LARC (OR 0.860; 95% CI 0.775-0.954). This information shows that unemployed women have a higher chance of using LARC. Meanwhile, married women are 36.608 times more likely than single women to use LARC (OR 36.608; 95% CI 5.084-263.583).

Table 2 informs that multiparous women were 2.141 times more likely than primiparous women to use SARC (OR 2.141; 95% CI 1.690-2.711). Grand multiparous women were 2.009 times more likely than primiparous women to use SARC (OR 2.009; 95% CI 1.814-2.224). On the other hand, multiparous women were 0.753 times more likely than primiparous women to use SARC (OR 0.753; 95% CI 0.572-0.991). The results of this analysis indicate that multiparous and grand multiparous have a higher likelihood of using SARC, meanwhile, multiparous women have a lower likelihood of using LARC.

The results of the analysis inform that multiparous and grand multiparous have a higher probability of using SARC. Meanwhile, multiparous women have a lower probability of using LARC. Parity as a determinant of contraceptive use was also confirmed in previous studies in Nigeria and South Africa. The higher the parity, the more likely it is to take advantage of modern contraceptives^{27,37,38}.

Insured women were 0.730 more likely than uninsured women to use LARC (0.730; 95% CI 0.657-0.812). This means that uninsured poor women are more likely to use LARC. This information is contradictory to previous studies, which informs that health insurance can increase the use of modern contraceptives³⁹⁻⁴¹. In general, having health insurance is a protective factor to achieve better access in the health sector^{42,43}.

CONCLUSIONS

Based on the results of the analysis it could be concluded 7 factors related to the choice of contraceptive methods in the poor in Indonesia. The seven factors are the type of place of residence, age group, education level, employment status, marital status, parity, and health insurance.

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