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## Original Article

## The availability of family planning information enable the used of traditional contraceptive in Yogyakarta



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9

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## ABSTRACT

**Introduction:** Maternal Mortality Rate (MMR) is one indicator that shows the success of the maternal health program. Efforts to reduce maternal mortality rates need to be supported by an increase in family planning participation coverage. Unmet Need for Family Planning in Yogyakarta was 15.14%, the data is still far from the Indonesian National Population and Family Planning Board target to reduce the number of unmet needs in 2019 of 9.91%. This study aimed to analyze enabling factors that contribute to traditional contraception in Yogyakarta using the L.Green Theory approach. The enabling factor analyzed were family income, availability of contraception information, availability of contraception service, ownership of health assurance.

**Methods:** Quantitative research used a cross-sectional approach, conducted on a three district in Yogyakarta city. Respondents of this research were 147 fertile ages women selected by cluster sampling. Multivariable analysis was carried out using logistic regression.

**Results:** Based on a logistic regression test, the enabling factor that statistically significant contributes to the use of traditional contraception was the availability of contraception information with  $POR=15.94$ .

**Conclusion:** Fertile aged women do not get family planning information 15.94 times as likely to use traditional contraception than fertile aged women who get family planning information. Promotion for modern contraception used to the women and her family through counseling on health care facilities or mass media was needed.

## Introduction

The National Population and Family Planning Board of Indonesia considers that the development of family planning in Indonesia is still not encouraging. This can be seen from the increased use of contraception (1) and the decrease in the number of unmet need based on the results of the Indonesian Demographic and Health Survey (IDHS) from year to year that have not reached the target of the National Medium-Term Development Plan of Indonesia Government (1). The use of contraception is scientifically proven to provide health benefits, including preventing unplanned pregnancies, regulating birth spacing, improving women's and children's lives, reducing maternal and infant mortality (2). In the area of Yogyakarta City, the achievement of the maternal mortality rate (MMR) was still 104 in 100,000 live births (3). This figure is still far beyond the Sustainable Development Goals (SDGs) target, where the achievement of a reduction in MMR of 70 in 100,000 live births until 2030.

Maternal deaths can be caused by a high-risk pregnancy that found in mothers who have the problem of "4T" that are too old (>35 years old), too young (<20 years old), too many (> 4 births), and too close to the distance of pregnancy (<2 years) (4). Efforts to reduce MMR need to be supported by expanding and

improving the coverage of family planning participation. Family planning is a program that aims to increase community awareness and participation by maturing the marriage age, regulate birth, foster family resilience, increasing the welfare of small families, happy and prosperous (5).

Yogyakarta Health Department data shows the number of fertile age couple in 2017 amounted to 46,307, where those who participated in active family planning were 34,831 (75.22%) and new family planning were 1,05 (3.47%) (3). Based on the family data collection results in 2018, 946 fertile age couples in Yogyakarta used traditional contraception (natural). The three highest data were in the Mergangsan sub-district area, many as 172, Mantrijeron sub-district 154 and Gondokusuman I sub-district many as 149. While unmet need data in Yogyakarta were 15.14%, the data is still far from the National Population and Family Planning Board target to reduce the number of unmet needs in 2019 of 9.91% (6). According to the Ministry of Health, contraceptives devices are divided into both traditional and modern ones. Modern contraceptives/ devices consist of injections, pills, female sterilizers, male sterilizers, IUD/ spiral, implants, condoms, and diaphragms (7).

2

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Lawrence Green's theory of behavior states that there are enabling factors that affect a person's health behavior. Enabling factors facilitate behavior or actions, for example, fu<sup>15</sup> transportation, facilities, government policies, and so forth. The availability of health facilities, access to health facilities, and society is very influential on community groups' behavior. The effect of resources on behavior can be positive or negative (8). Many enabling factors influenced the traditional contraceptive used based on previous research (9)(10)(11)(12). Research conducted by Nita et al. states that socioeconomic influences contraception, where someone who has high socioeconomic status tends to prefer Intrauterine Device (IUD) contraception (9). Ariyanti et al. showed a relationship between the ratio of doctors, midwives, family planning clinics, and Family Planning Field Officers based on the wide-area with the total unmet need. This means that the higher ratio of doctors, midwives and family planning clinics per 1000km<sup>2</sup>, the percentage of unmet need will be lower (10). Purwaningsih et al. found that respondents' interest in using the contraceptive amenorrhea method (MAL) rise to 52.9% after family planning counseling was given (11). Becker stated that insurance ownership affects contraceptive use. People with low economic levels still use contraception guaranteed by the government or use the Health Insurance Administration Agency (12). In Indonesia, health insurance that is managed by the government is called BPJS. Based on the background stated above, that the still high MMR and the prevalence of family planning's unmet need in Yog<sup>14</sup>arta with the high number of traditional contraceptive users, this study is aimed to determine the enabling factors, namely family income, availability <sup>1</sup> contraception information, availability of contraception service, and ownership of health insurance that enable the behavior of traditional contraceptive used in Yogyakarta.

**Methods**

**Research design**

This research used a quantitative design with cross sectional approach. Research setting was on the three district areas in

Yogyakarta City with the h<sup>5</sup>est prevalence of traditional family planning users, according to the 2015 National Population and Family Planning Board Family Data collection. The locations are the District of Mantrijeron, <sup>3</sup> Mergangsan, and Gondokusuman I. Data collected carried out in July 2019.

**Population**

The target population in this study were fertile age woman who live in the Mantrijeron district as much as 4,192, Mergangsan district as much as 3,545, and the Gondokusuman I district as much as 3,381. The total fertile age women as a population in this study were 11,118 (3).

The inclusion and exclusion criteria in this study are:

- a. Inclusion Criteria: 1) Fertile woman aged 15-49 years, 2) Are married and still have a husband,
- b. Exclusion Criteria: 1) Moving from the working area of the Mantrijeron, Mergangsan and, Gondokusuman I Primary Health Care, 2) Women of childbearing age who refuse to become respondents.

**Sampling method**

This study used probability sampling in the form of cluster sampling. The total subjects were determined to be twice the number of samples calculated using the simple random sampling equation to obtain the desired precision. This is because the value of the design effect set is 2.

At the 95% confidence level, the proportion of traditional contraceptive use in the Special Region of Yogyakarta is 18% (13), the absolute precision is set at 0.10 and the number of fertile age women in the Mergangsan, Mantrijeron, and Gondokusuman I district are 11,118 people (3) then the minimum number of samples is 57 people. Thus, the minimum number of samples needed in the cluster sampling is 2 x 57 = 114 people distributed into 3 clusters (sub-districts), so that the average subjects involved per cluster are 38 people divided into all villages in the sub-district / cluster. To anticipate the dropout, the researchers added a sample of 10%. The following sampling scheme:

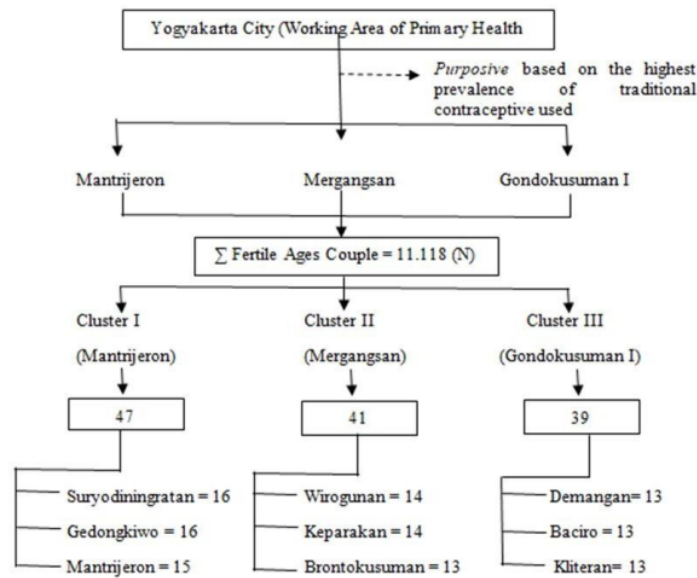


Figure 1. Sampling Schema

The research sample was taken by lottery technique or turning the bottle at the midpoint of the cluster's location to determine the direction of the first respondent's house and the next respondent was determined by zigzag to avoid bias. This study used a questionnaire as an instrument to measure the enabling factors for the use of traditional contraceptives. The questionnaire was adopted from the Indonesia Demographic Health Survey in the year 2017 (1). Multivariable analysis was carried out to see the independent variables that most influenced the dependent variable using the Logistic Regression test, with a 95% confidence level.

**Results**

In this study, respondents were women of childbearing age who

were married aged 15-49 years with a total of 106 people. From the results of filling out the questionnaire obtained the following characteristics of respondents:

Table 1 shows that most respondents aged 36-49 years. Mother's education is mostly in the primary and secondary education categories of 80 people and husband's education is mostly in the primary and secondary education category of 78 people. Mother's job is mostly taking care of a household as many as 69 people and husbands' work is mostly private employees as many as 49 people.

Based on Table 1, the total number of respondents was ≤ 2 years old as many as 71. The age of the first time respondents married were ≥ 21 years old as many as 79 people and the length of marriage was mostly 10 years by 67 people.

**Table 1.** Frequency distribution of characteristic respondent

Characteristic	Frequency	Percentage %
<b>Women's ages (year)</b>		
15-19	1	0.94
20-35	41	36.68
36-49	64	60.38
<b>Women's education</b>		
Basic and middle education	80	75.47
Higher education	26	24.53
<b>Husband's education</b>		
Basic and middle education	78	73.58
Higher education	28	26.42
<b>Women's occupation</b>		
Housewife	69	65.09
Formal sector occupation	15	14.15
Informal sector occupation	22	20.75
<b>Husband's occupation</b>		
Freelance	20	18.87
Private employee	49	46.23
Entrepreneur	26	24.53
State employee/soldier/police	11	10.38
<b>Number of children</b>		
>2	35	33.02
≤2	71	66.98
<b>Age at First Married (year)</b>		
<21	27	25.47
≥ 21	79	74.53
<b>Age of marriage (year)</b>		
<10	39	36.79
≥10	67	63.21
<b>Total</b>	<b>106</b>	<b>100</b>

**Table 2.** Chi-square analysis and alternative Fisher test on relation family income, availability contraception information, and ownership of health assurance with traditional contraception used

Variable	Traditional contraception used				Total		P-Value	POR CI 95%
	No		Yes		f	%		
	f	%	f	%	f	%		
<b>Family income</b>							0.167	2.61 0.805-8.493
<IDR1,846,400	34	89.5	4	10.5	38	100		
≥IDR 1,846,400	52	76.5	16	23.5	68	100		
<b>Availability of contraception information</b>							0.091	9.44 0.812-109.855
Yes	85	82.5	18	17.5	103	100		
No	1	33.3	2	66.7	3	100		
<b>Availability of contraception service</b>							0.091	9.44 0.812-109.855
Yes	85	82.5	18	17.5	103	100		
No	1	33.3	2	66.7	3	100		
<b>Ownership of health assurance</b>							1.000	0.68 0.141-3.337
Yes	74	80.4	18	19.6	92	100		
No	12	85.7	2	14.3	14	100		

**Table 3.** The multivariate analysis using logistic regression in the variable of family income, availability of contraception information, and ownership of health assurance

Variable	Unadjusted OR	Unadjusted OR	Unadjusted OR	Adjusted OR
<b>Family income</b>				
<IDR 1,846,400	1 [1.1]			1 [1.1]
> IDR1,846,400	2.615 [0.805,8.493]			3.631 [0.971,13.57]
<b>Availability of contraception information</b>				
Yes		1 [1.1]		1 [1.1]
No		9.444 [0.812,109.9]		15.94* [1.121,226.5]
<b>Ownership of health assurance</b>				
Yes			1 [1.1]	1 [1.1]
No			0.685 [0.141,3.337]	0.592 [0.188,2.980]
<b>Observations</b>	106	106	106	106
Pseudo R-Squared	0.028	0.033	0.002	0.078
AIC	103.8	103.3	106.4	102.7
BIC	109.1	108.6	111.8	113.3

\*p,0.05, \*\*p<0.01

Table 2 showed that respondents with family income  $\geq$  IDR 1,846,400 and not used traditional contraceptive as many as 52 women (76.5%). Statistically p values = 0.167 ( $>0.05$ ) it means family income didn't has relation with traditional contraceptive used (POR=2.61 CI95%=0.805-8.493).

Availability of contraception information showed that as many as 85 women (82.5%) that did not use traditional contraceptive said that there were a contraception information. Statistically p values = 0.091 (0.05) it means availability on contraception information did not has relation with traditional contraceptive used (POR=9.444 CI95%=0.812-109.855).

Health assurance ownership showed that 74 women (80.4%) who did not use traditional contraceptives have health assurance. Statistically, p values = 1.000 ( $> 0.05$ ) it means ownership of health assurance didn't has relation with traditional contraceptive used (POR=0.685 CI95%=0.141-3.337).

From the independent variables (family income, availability of contraception information, and ownership of health assurance), multivariable logistic regression analysis was used to look at predictors of traditional contraceptive use. The variable availability of contraception services was excluded from multivariable logistic regression because it was multicollinear with variable availability of contraception information.

Table 3 shows that the availability of family planning information is statistically significant. Fertile aged women do not get family planning information 15.94 times as likely to use traditional contraception than fertile aged women who get family planning information.

**Discussion**

Our research found that the availability of contraception information influenced traditional contraceptive used. This finding has a relation with Rios-Zertuche's research that information from counseling about contraceptive used in health facilities was associated with the increased use of

modern contraceptives. Family planning counseling in health facilities is the main intervention to meet unmet needs. However, it does not imply that a woman in need who visits health services would always receive counseling. Therefore, it is important to address service gaps in counseling and contraceptive services to ensure that all unmet needs women can offer contraception through counseling. (14).

The importance for women with unmet need contraceptive to get modern contraceptive access is also mentioned in Bitew's research. The result showed that children born to mothers using modern contraception have a higher probability of survival, than children of mothers who are unmet need of contraception or have never used contraception; it exists in all survival ages. This finding is reinforced by multivariate analysis after adjusting for important covariate effects, such as maternal education, wealth status, and marital status. The results still show a significant correlation between under-five mortality and the use of contraception and the intention of fertile age couples to use contraception (15).

Contraception information can be accessed by counseling in a health care facility and through mass media. Mass media has a role as an external agent of change to attenuate the impact of collective norms on an individual's behavior. Further studies are needed to find out how and why mass media can weaken the influence of collective norms on someone's behavior using contraception in some subpopulation (16).

This study's result is in line with recommendations made by Rios-Zertuche on his research regarding the need for improvement in contraceptive information services to fulfill the needs of modern contraception. Rios-Zertuche states that the government should focus more on programs to increase public knowledge about the use of reversible long-term contraception methods and offer more effective promotional methods to increase contraceptive use. This can be strengthened by increasing focus on developing health insurance in promoting public health rather than curative care; it is predicted to increase contraceptive use. This is needed so that all women who visit health services can get contraceptive offers without exception (14).

## Conclusion

We found that the availability of contraception information enables the rate of traditional contraceptives used in Yogyakarta. Based on statistical analysis, it is obtained that fertile age couples who do not get family planning information 5.15.94 times enable to use traditional contraceptives that fertile age couples who get family planning information. Promotion for modern contraceptives used to the women and her family through counseling on health care facilities or mass media was needed.

## Ethical disclosure

Not declare.

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## Author contributions

Research concept and design, writing research report, drafting the manuscript: 1<sup>st</sup> and 2<sup>nd</sup> authors; Statistical analysis and interpretation the data: 3<sup>rd</sup> author; Data collected: 4<sup>th</sup> and 5<sup>th</sup> authors.

## Conflict of interest

No conflict of interest has been declared by the authors.

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