Determinant Factors Affecting Influencing Eligible Women with the Selection of Contraceptive Intrauterine Devices (IUDs)

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Abstract. Intrauterine Devices (IUDs) **c**ontraceptive method **i**s a practical and effective long-term contraceptive method for use by eligible women. Many factors cause the low interest in eligible woman in choosing the IUD method as a contraceptive. This study aimed to analyze the determinants that influence eligible women in choosing an intrauterine contraceptive method. The total population is 860 people. The sample was 273 people. The sampling technique uses probability sampling with proportional random sampling technique. Data analysis used multiple logistic regression statistical tests while the significance test uses an error degree of 0.05. The results of this study are the factors of attitudes of eligible women and husband's support with a value of p = 0.002 for the attitudes of eligible women and p = 0.000 for husband's support. Attitude effect 57.2 times while husband's support is 80.5 times in choosing the IUD as a contraceptive method by eligible women. Health workers and midwives are urged to increase the socialization and approach to couples of childbearing age in order to choose to use the IUD contraceptive method.

Keywords: Affecting, Women, Contraceptive

1. INTRODUCTION

Contraception is a method of preventing pregnancy. Other benefits of contraception are to reduce the number of abortions, prevent unwanted pregnancies, reduce population growth rates, and reduce the number of maternal and neonatal deaths due to complications during pregnancy and delivery [1]. Indonesia is a developing country with a population of 268 million inhabitants with a population density of 140 people / km^2 and a population growth rate of 1.31% [2]. In ASEAN countries, Indonesia is the most populous country, fourth after Singapore, the Philippines, and Vietnam [3].

The most effective contraceptive method used by women worldwide is the Intrauterine Device (IUD) [4] [5]. However, in Indonesia, IUD users are very few, only 7.15%, and in East Java, it is 7.07%. In East Java province, the participation of IUD users decreased from 9.15% in 2017 to 8.96% in 2018. The IUD has advantages when compared to other contraceptives such as injections and pills because it does not have hormonal side effects, does not need to keep always remember the injection schedule or pill schedule, does not affect the quality and quantity of breast milk, and does not need surgery [6]. Although previously, many studies have looked for factors that influence eligible women who do not want to use the IUD as a contraceptive, such as

religious factors, age, education level, and myths about IUDs [1]. However, other studies are needed to identify determinants that make local sense. So it is essential to research other areas so that the socio-demographic problems are more visible so that it is more accurate to identify the factors that influence eligible women in choosing IUD contraceptives. So understanding these factors can help develop strategies to increase the use of IUDs in Sidomulyo urban village, Krian sub-district, Sidoarjo regency.

2. METHODS
2.1. Study Area and Periods
The research study was conducted in Sidomulyo urban village, Krian sub-district, Sidoarjo regency. Held from February to July 2019. Sidomulyo urban village is one of 22 urban villages in Krian sub-district with an area of 1.9 km^2, located 20 km southwest of Surabaya. The location of the urban village of Sidomulyo, Krian sub-district, is very strategic where in the east it is bordered by Surabaya, to the south by Sidoarjo, to the north by Gresik, and to the west by Mojokerto. In the Krian sub-district, there are 2 Health Public located in the center of Krian city and in Barengkrajan urban village. Sidomulyo urban village is divided into 6 hamlet, 22 neighborhood and 1,460 households.

2.2. Study design and population

A cross-sectional analytic study was conducted on a group of eligible women who were married. The population in this study were 860 active family planning participants in Sidomulyo urban village. The sample size was determined using the formula $n = N / 1 + N (d^2)$ in order to obtain a sample size of n = 273. The sample size will be taken from 6 hamlet groups with the formula n = (a / b) x c, the result is 29 samples from hamlet I, 27 samples from hamlet II, 61 samples from hamlet III, 55 samples from hamlet IV, 78 samples from hamlet V, and 23 samples from hamlet VI. Samples were randomly selected by the lottery method using the proportional random sampling technique.

2.3. Data collection procedures

Data were collected through a structured interview method using a questionnaire. Interviewers visit homes for approval then conduct interviews for data collection. Participants were interviewed regarding the variables socio-demographic, knowledge, attitudes, husband's support, and selected contraceptives.

2.4. Measurement

Knowledge. The variable knowledge about the IUD was measured using 10 questions containing 7 positive questions and 3 negative questions. For "correct" answers, you get a score of 1, while for "wrong" answers, you get a score of 0, then totaled for and compared with the number of questions multiplied by 100%. The results will be grouped into 3 categories: good knowledge (score 76% -100%); sufficient knowledge (score 56% -75%); and lack of knowledge (score <55%).

Attitude. Attitudes towards the choice of IUD contraception were measured using 9 questions with a Likert scale, the score highest was 36 and the lowest was 9. The variables participant's attitudes were grouped into 2 categories: attitudes negative towards the IUD if the total score was <26 and positive attitudes towards the IUD if the total score was ≥

Age. Age is grouped into two categories. If age ≤ 30 score 0, and if age> 30 score 1.

Education. Education is classified into two categories. If education is at the level of SD / SMP /

SMA or equivalent, the score is 0, if the education is at the level of academy / tertiary education, then the score is 1.

Economic. Look at the results of income grouped into 2 categories. If the husband's income or the head of the family > Minimum Wage Regional (UMR) IDR 3,864,696, - score 1, and if ≤ UMR IDR 3,864,696 the score is 0.

Parity. Parity is grouped into two categories. The score of 0 for mothers primipara, while the score is 1 for mothers multipara.

Husband's support. Husband's support was measured using 11 statements. The statement on the husband's support variable consists of 2 types of statements, namely 6 positive statements and 4 negative statements. For husband support variables will be grouped into 2 categories, namely: husband is not support, if the score obtained is < 15 and the husband is support, if the score is ≥ 15.

2.5. Management and data analysis

In this study, researchers used multiple logistic regression statistical tests. All data obtained were processed with the help of computerized devices. While the significance test uses a degree of error of 0.05.

3. RESULTS AND DISCUSSION

3.1. Subject characteristics

A total of 273 study subjects were interviewed. The frequency distribution of the characteristics of research subjects is described in table 1. In table 1 there are 235 (86.1%) study participants in the age group > 30 years. A total of 214 (78.4%) study participants were in the multiparous group. A total of 192 (70.3%) study participants were in the college education group. A total of 211 (77.3%) research participants were in their husband's education group, namely college. A total of 167 (61.2%) study participants were in the good economic group. A total of 247 (90.5%) study participants were in the low knowledge group. A total of 237 (86.8%) study participants were in the negative attitude group. A total of 238 (87.2%) study participants were in the husband group who did not support choosing IUD contraception.

Table 1. Characteristics of Study Subjects

Variable	Frequency (n)	Percentage (%)
Age		
≤ 30 years	38	13.9
> 30 years	235	86.1
Parity		
Primipara	59	21.6
Multipara	214	78.4
Education		
Primary	81	29.7
Higher	192	70.3
Monthly income		
Poor	106	38.8
Fair	167	61.2
Knowledge		
Low	247	90.5
High	26	9.5
Attitude		
Negative	237	86.8
Positive	36	13.2
Husband support		
Does not support	238	87.2
Supports	35	12.8

3.2. The results of the bivariate test for IUD selection

Table 2 shows the relationship between age, parity, education, monthly income, knowledge, attitudes, and husband's support with IUD selection.

TABLE 2. Results of bivariate test electionIUD

Independent Variable	IUD Selection				Total		Sig	OR
	Do not choose		Choose					
	n	%	n	%	n	%		
Age								
≤ 30 years	35	14.2	3	11.1	38	13,9	0.658	1.327
> 30 years	211	85.8	24	88.9	235	86.1		
Parity								
Primipara	56	22.8	3	11.1	59	21.6	0.174	2.358
Multipara	190	77.2	24	88.9	214	78.4		
Education								
Primary	80	32.5	1	3.7	81	29.7	0.014	12.53
Higher	166	67.5	26	96.3	192	70.3		
Monthly income								
Poor	100	40.7	6	22.2	106	38.8	0.069	2.397
Fair	146	59.3	21	77.8	167	61.2		
Knowledge								
Low	239	97.2	8	29.6	247	90.5	0.000	81.08
High	7	2.8	19	70.4	26	9.5		
Attitude								
Negative	236	95.9	1	3.7	237	86.8	0.000	61.36
Positive	10	4.1	26	96.3	36	13.2		
Husband support								
Does not support	236	95.9	2	7.4	238	87.2	0.000	61.18
Supports	10	4.1	25	92.6	35	12.8		

3.3. The influence of independent variables on election simultaneously IUD

TABLE 3. Results of multivariate analysis election IUD

variables Independent	Sig	OR	95% CI
Education	0.884	1.3	0.037 - 45.945
Knowledge	0.116	8.1	0.596 - 110.999
Attitude	0.002	57.2	4.405 - 744.151
Husband support	0.000	80.5	7.813 - 830.108

Based on table 3 it can be seen that only the variable attitudes of women of childbearing age and husband's support have an effect together, namely with a value of $p = 0.002$ for attitudes and $p = 0.000$ for husband's support. Attitude has an effect of 57.2 times, while husband's support is 80.5 times in choosing IUDs for women of childbearing age.

3.4. Discussion

This study assessed the factors that influence women of childbearing age in choosing the IUD as a contraceptive device. The choice of IUD contraception is associated with factors of knowledge, attitudes and support of husbands. For the factors of age, parity, education and income, it is monthly proven that there is no significant relationship.

The results of this study indicate that husband's support is the most determining factor for a eligible woman who is willing to choose IUD contraception. Women whose husbands / partners supported the contraceptive IUD were about 126 times more likely to choose the IUD as a contraceptive method. This finding is consistent with findings from other regions of Indonesia [7] [8] [9] and from Ethiopia [1].

In Indonesia, women's ability to make decisions is lower than that of men. This is due to various factors including religious, social, and cultural factors in which a woman must obey her husband. In making a decision, a wife needs the husband's approval, because of the husband's role as head of the family, family protector, breadwinner, and someone who can make decisions in the family. In order to increase the participation of women of childbearing age in choosing contraceptive IUDs, it is highly recommended to involve their husbands by providing accurate information about IUD contraception [9].

Husband's support in determining the choice of contraception is very necessary, because without support from the husband, there will be no feeling of comfort. Husband's support in the choice of IUD contraception can mean that the husband is able to provide information related to IUD contraception, is willing to take his wife to the place of service, and is willing to pay for IUD insertion [10].

The results of this study also reveal that the attitudes of women of childbearing age also greatly influence the choice of IUD contraception. The results of the data analysis state that the attitude variable has an effect of 57.2 times, meaning that a woman of childbearing age who has a positive attitude is 57.2 more likely to choose IUD contraception. In Sidomulyo urban village, most eligible women have negative attitudes towards IUD contraception so that 86.8% of eligible women there do not choose IUD contraception. The results of this study are consistent with the results of studies in other regions in Indonesia [11] [9].

Attitude is a person's closed response to certain stimuli or objects that involve the opinion and emotional factors in question. Attitude functions to adapt to environmental conditions, regulate one's behavior, regulate one's treatment and personality statements [6]. Attitudes are formed because of a person's interaction with the physical and social environment around him. Attitude is not an activity or action, but attitude is a predisposition of an action or behavior [12].

Other factors from this study such as age, parity, education, monthly income and knowledge of eligible women were not proven to influence IUD selection. Even so, it still cannot be ignored, providing correct information about the IUD needs to always be done by health workers. The government is also trying to increase collaboration with the Social Security Administration (BPJS) so that family planning services can still be received by the public for free. After the enactment of Presidential Regulation Number 19 Year 2016 which has been in effect since April 1, 2016, family planning services or contraceptive installation for BPJS participants are provided free of charge and participants do not need to pay for the procurement of contraceptives. The types of family planning services that can be insured by the BPJS, such as

installing and removing the contraceptive IUD Nova T.device, with this facility, factors economics are not a reason for eligible women not to do family planning.

4. CONCLUSION

The factors that most influence eligible women in choosing IUD contraception in Sidomulyo urban village are the attitudes and support of their husbands. Attitude has an effect of 57.2 times, while husband's support is 80.5 times. For other factors such as age, parity, education, monthly income, and knowledge were not proven to significantly influence eligible women in choosing IUD contraception.

REFERENCES

[1]   N. Dereje, B. Engida, and RP Holland, "Factors associated with intrauterine contraceptive device use among women of reproductive age group in Addis Ababa, Ethiopia: A case control study," *PLoS One*, vol. 15, no. 2, pp. 1–12, 2020, doi: 10.1371/journal.pone.0229071.

[2]   "Central Bureau of Statistics." https://www.bps.go.id/indidik/indidik/view_data_pub/0000/api_pub/50/da_03/1 (accessed Dec. 05, 2020).

[3]   "ASEAN Countries." https://kompaspedia.kompas.id/baca/infografik/peta-tematik/negara-negara-asean (accessed Dec. 05, 2020).

[4]   R. Joshi, S. Bhattarai, K. Simkhada, and S. Thapa, "Determinants of Intrauterine Contraceptive Device Use Among the Women of Urban Areas of Nepal," *Nepal J. Obstet. Gynaecol.*, vol. 8, no. 2, pp. 16–20, 2014, doi: 10.3126 / njog.v8i2.9760.

[5]   A. Nelson and N. Massoudi, MPH, "New developments in intrauterine device use: focus on the US," *Open Access J. Contracept.*, vol. Volume 7, pp. 127–141, 2016, doi: 10.2147 / oajc.s85755.

[6]   RA Fadzilah, B. Yuniyanti, and M. Masini, "Determinant Factors Correlate with the Selection of Contraceptive IntraUterine Device (IUD)," *Midwifery Nurse. Res.*, vol. 1, no. 1, p. 16, 2019, doi: 10.31983 / manr.v1i1.4062.

[7]   Y. Nur Indah Sari *et al.*, "FACTORS RELATED TO MOTHER'S INTEREST IN SELECTING IUD CONTRACEPTION EQUIPMENT," *J. Kesehat. Masy.*, vol. 5,

no. 1, 2019, doi: 10.35329 / jkesmas. v5i1.308.

[8]   N. Publication, "FACTORS RELATED TO THE SELECTION OF CONTRACEPTION TOOLS INTRA UTERINE DEVICES (IUD) IN MOTHER IN BANTUL YOGYAKARTA DISTRICT."

[9]   RR Utami, "Factors Affecting the Interest of Iud Women in the Sembada Family Clinic," *J. Health.*, vol. 7, no. 1, pp. 66–75, 2019.

[10]   E. Mulyani, A. Rachmawati, and RE Safriana, "The Effect of Husband's Support on theIntra Uterine Device (IUD) Contraceptive Method," *Choice ofJ. Midpro*, vol. 11, no. 2, p. 79, 2019, doi: 10.30736 / md.v11i2.96.

[11]   B. Susilowati, C. Web Adi Gunawan, and B. Murti, "Factors Associated with Use of Intrauterine Devices in Women of Reproductive Age in Boyolali, Central Java," *J. Matern. Child Heal.*, vol. 03, no. 04, pp. 252–260, 2018, doi: 10.26911 / thejmch.2018.03.04.02.

[12]   S. Endarwati, S. Endarwati, A. Dharma, H. Kediri, and K. Kediri, "Interest of Women in Fertile Age Couples (PUS) Using Intravenous Contraceptives (IUDs) in RW 05 Kelurahan 5 Campurejo Village Kediri City The Interest of Women From Fertile Couples in Using I Intra Uterine Device (IUD) (in RW 05 Campurejo Village M, "vol. 8, no. 1, pp. 17–22, 2019.