

## Research Article

## Factors Affecting Selection of Contraceptive Methods and Its Length of Use

### *Faktor-Faktor yang Mempengaruhi Pemilihan Jenis Kontrasepsi dan Lama Pemakaiannya*

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#### Abstract

**Objective:** To evaluate the factors related to the selection of contraceptive methods and length of use on acceptors in Raden Saleh Clinic and Fatmawati General Hospital.

**Method:** The study was a prospective observational study designs. The factors that we observed include the family planning factor (wife age, number of desired children and infertility), subjective factors (side effect experience of contraception, support from the husband/family, and religion), objective factors (medical disorders, person helping to select contraception, family planning service centre and availability of contraceptives) and the level of motivation (level of education). All the clients who will receive contraception and meet the criteria for the research were interviewed and given questionnaires until the desired sample size is achieved. The study was conducted at the Raden Saleh Clinic and Fatmawati General Hospital. We then conducted follow-up at 3 and 6 months after the use of the contraceptive methods to assess the length of use.

**Result:** The total number of subjects was 151 people. The average age of respondents was 31 years old, with the contraception options being IUD (67.1%), implants (17.8%), sterilization (7.2%), injectable contraception (3.9%), and oral contraception (3.9%). From all the factors studied, only the number of desired children were found to affect the selection of contraceptive methods significantly ( $p=0.008$ ) in Fatmawati General Hospital, while in Raden Saleh Clinic all of the factors did not affect the selection of contraceptive method ( $p>0.05$ ). We also found that all of these factors do not have a significant relationship to the length of contraceptive use ( $p>0.05$ ). There were 6.6% of subjects ( $n=10$ ) who switched the type of contraception. From all of them, there was a trend of switching from oral contraceptive to injectable method (33.3%) and from IUD to injectable method (66.7%).

**Conclusion:** Only the number of desired children has an effect on the selection of contraceptive methods in Fatmawati General Hospital, while in Raden Saleh Clinic all of the factors studied do not affect in selection of contraceptive methods. Family planning factors, subjective factors, objective factors and motivation levels have no effect on the length of contraceptive use by clients at Raden Saleh Clinic and Fatmawati General Hospital.

[Indones J Obstet Gynecol 2015; 2: 94-99]

**Keywords:** contraception methods, factors, length of use, selection

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#### Abstrak

**Tujuan:** Meneliti faktor-faktor yang mempengaruhi pemilihan jenis kontrasepsi dan lama pemakaiannya pada akseptor KB di Klinik Raden Saleh dan Rumah Sakit Umum Pusat Fatmawati.

**Metode:** Studi ini adalah penelitian observasional dengan desain prospektif. Faktor yang diteliti meliputi faktor perencanaan keluarga (usia istri, jumlah anak yang diinginkan dan infertilitas), faktor subjektif (pengalaman efek samping kontrasepsi, dukungan suami/keluarga dan agama), faktor objektif (gangguan medis, yang membantu memilih kontrasepsi, tempat layanan kontrasepsi dan ketersediaan alat kontrasepsi) dan tingkat motivasi (tingkat pendidikan). Semua klien yang akan menerima kontrasepsi dan memenuhi kriteria penelitian, diwawancara dan diminta mengisi kuesioner hingga mencapai jumlah sampel yang diinginkan. Penelitian dilakukan di Klinik Raden Saleh RSCM dan RSUP Fatmawati. Kemudian dilakukan follow up pada 3 dan 6 bulan pasca menerima kontrasepsi untuk menilai lama pemakaiannya.

**Hasil:** Jumlah total subjek sebanyak 151 orang. Rata-rata usia responden 31 tahun dengan pilihan jenis kontrasepsi AKDR 67,1%, implan 17,8%, kontap 7,2%, suntik 3,9% dan oral 3,9%. Dari seluruh faktor yang diteliti, hanya faktor jumlah anak yang diinginkan yang terbukti secara statistik berpengaruh dalam pemilihan jenis kontrasepsi ( $p=0,008$ ) di RSUP Fatmawati, sedangkan di Klinik Raden Saleh semua faktor tersebut tidak terbukti secara statistik berpengaruh dalam pemilihan jenis kontrasepsi ( $p>0,05$ ). Didapatkan pula bahwa seluruh faktor tersebut juga tidak memiliki pengaruh secara statistik ( $p>0,05$ ) terhadap lamanya pemakaian kontrasepsi, baik di Klinik Raden Saleh maupun di RSUP Fatmawati. Dari 6,6% subjek ( $n=10$ ) yang mengganti jenis kontrasepsi, terdapat kecenderungan perubahan jenis kontrasepsi dari oral menjadi suntik (33,3%) dan AKDR menjadi suntik (66,7%).

**Kesimpulan:** Faktor jumlah anak yang diinginkan memiliki pengaruh dalam pemilihan jenis kontrasepsi di RSUP Fatmawati, sedangkan di Klinik Raden Saleh semua faktor yang diteliti tidak berpengaruh dalam pemilihan jenis kontrasepsi. Faktor perencanaan keluarga, faktor subjektif, faktor objektif dan tingkat motivasi tidak memiliki pengaruh terhadap lamanya pemakaian kontrasepsi pada klien di Klinik Raden Saleh dan RSUP Fatmawati.

[Maj Obstet Ginekolog Indones 2015; 2: 94-99]

**Kata kunci:** faktor-faktor, jenis kontrasepsi, lama pemakaian, pemilihan

## INTRODUCTION

Indonesia is a large country with the fourth biggest population in the world after China, India and United States. According to the 2010 demographic survey published by the Central Bureau of Statistics Department in August 2010, the Indonesian population amounted to 237,556,363 people.<sup>1</sup> If this population growth is not controlled, it will cause many problems in the future. Indonesia's population will reach 273 million by the year 2025 if the family planning program does not work well.<sup>2</sup> This condition would complicate the government's efforts in improving the welfare of the people. It can also cause serious problems in the economic, social, political, cultural, and security sectors, which will impact the health situation. Therefore, family planning services held by the government of the Republic of Indonesia are currently focusing on avoiding population explosion in the future.<sup>2</sup> Based on Rikesdas 2013, the prevalence of family planning in Indonesia is 59.3%, with 51.8 % using hormonal contraception and 7.5% using non-hormonal contraception.<sup>3</sup>

Counseling is an important aspect in family planning and reproductive health services.<sup>4</sup> By doing counseling, we are able to assist clients in selecting and deciding the type of contraception that will be used in accordance with their choice. Based on many literatures, there are 4 factors that influence the client in choosing a contraceptive method, they are family planning factors (wife age, number of desired children, the frequency of intercourse and infertility), subjective factors (previous experience with contraceptive methods, effectiveness, contraception side effect, the support of husband/family, religion, and costs), objective factors (consideration of medical issues, the competence of health care providers, the availability of contraception, menstrual history, family history, physical examination, and pelvic examination) and the motivation level (level of education, level of prosperity, and lifestyle).<sup>5-8</sup> All of these factors will also affect the success rate of family planning programs.

Based on the research by Budi Palarto and Radita Kusumaningrum on childbearing aged couples in the Batang district, Central Java, they obtained that wife age, number of children, and level of education had a significant relationship with the choice of contraception, while the family welfare level factors, the ownership of Jamkesmas, level of knowledge, spousal support and influence of religion

does not have a meaningful relationship. From all of those factors mentioned above, wife age is the most influential factor in choosing the contraceptive methods.<sup>9</sup> However, so far there are no research on factors related to the length of contraception use among the acceptors.

## METHODS

We performed a prospective observational study aimed to determine the factors that influence the choice of contraception and its duration of use in Raden Saleh Clinic and Fatmawati Hospital in December 2013 to December 2014. The factors studied were grouped into four, they are the family planning factors (the wife age, the number of desired children and infertility), the subjective factors (previous experience with contraception side effects, support from the husband/family and religion), the objective factors (medical problems, the person helping in choosing contraception, place of contraceptive services and the availability of contraceptive methods), and the motivation level (education level).

The inclusion criteria in this study is women aged 18-45 years old who came to Raden Saleh Clinic and Fatmawati general hospital to get contraception. She can choose one of the existing contraception methods with equal probability and willing to participate in this study. The subjects were then followed until 3 and 6 months after using the contraception. All the clients who were willing to fill out a questionnaire, but were not reachable for follow-up after getting contraception were considered as dropouts.

Data was recorded and statistical analysis was performed using SPSS version 17.

## RESULT

During the study period we successfully recruited total of 152 subjects consecutively, 65 subjects in Raden Saleh Clinic and 87 subjects in Fatmawati general hospital. Then we conducted follow-up at 3 months and 6 months after using the contraception methods. At the first follow-up we discovered that 151 subjects were still using their chosen contraceptive methods and there was 1 subject who dropped out due to loss of contact (the provided

phone number was not active and she already moved to the another province). At second follow-up we found that 142 subjects still used the same contraceptive methods they initially chose.

In this study, the average age of our subjects was 31.38 years old, with 71.5% of them having graduated from middle education level (junior-senior high school). Almost 90% of the subjects are Muslims, which constitute as the majority religious belief in Indonesia. The selection of contraceptive

methods were mostly recommended by midwives or their husbands (85.4%). A total of 66.9% subjects chose Intra Uterine Device (IUD) as their contraceptive of choice. The reasons for using this method are to prevent pregnancy or to regulate the interval between pregnancies. Meanwhile, 4% of the subjects chose sterilization since they do not want to have anymore children. We also discovered that 64.2% of the subjects wanted to have only two children.

**Table 1.** The Relation between the Factors with the Selection of Contraception Methods in Fatmawati General Hospital

Characteristic	Oral n (%)	Injection n (%)	Implants n (%)	IUD n (%)	Sterilization n (%)	p
<b>Age of wife</b> mean (SD), years	0 (0)	28.6 (5.3)	28.8 (5.4)	28.3 (5.6)	35.3 (5.29)	0.005 <sup>a</sup>
<b>Education level</b>						
Low (no education -elementary)	0 (0)	1 (20.0)	2 (15.4)	2 (3.4)	1 (10.0)	0.461 <sup>b</sup>
Middle (junior-senior high school)	0 (0)	3 (60.0)	11 (84.6)	50 (86.2)	9 (90.0)	
High (Diploma - University)	0 (0)	1 (20.0)	0 (0)	6 (10.3)	0 (0)	
<b>Religion</b>						
Moslem	0 (0)	5 (100.0)	13 (100.0)	56 (96.6)	10 (100.0)	1.000 <sup>c</sup>
Christian	0 (0)	0 (0)	0 (0)	2 (3.4)	0 (0)	
<b>Husband opinion/support</b>						
Agree	0 (0)	5 (100.0)	13 (100.0)	57 (98.3)	10 (100.0)	N/A
Not Agree	0 (0)	0 (0)	0 (0)	1 (1.7)	0 (0)	
<b>Person helping to choose contraception</b>						
Midwife	0 (0)	0 (0)	2 (15.4)	16 (27.6)	3 (30.0)	0.206 <sup>c</sup>
Husband and family	0 (0)	5 (100.0)	5 (38.5)	32 (55.2)	6 (60.0)	
Doctor (GP and Ob-gyn)	0 (0)	0 (0)	6 (46.2)	10 (17.2)	1 (10.0)	
<b>Number of desired children</b>						
1 child	0 (0)	1 (20.0)	1 (7.7)	2 (3.4)	0 (0)	0.001 <sup>b</sup>
2 child	0 (0)	4 (80.0)	9 (69.2)	41 (70.7)	1 (10.0)	
> 2 child	0 (0)	0 (0)	3 (23.1)	15 (25.9)	9 (90.0)	
<b>Medical problems</b>						
Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	N/A
No	0 (0)	5 (100.0)	13 (100.0)	58 (100.0)	10 (100.0)	
<b>The duration of having the first child</b>						
≤ 1 year	0 (0)	4 (80.0)	9 (69.2)	35 (60.3)	5 (50.0)	0.994 <sup>c</sup>
> 1 year	0 (0)	1 (20.0)	4 (30.8)	23 (39.7)	5 (50.0)	
<b>The experience of contraception side effects</b>						
Yes	0 (0)	0 (0)	1 (7.7)	6 (10.3)	1 (10.0)	1.000 <sup>c</sup>
No	0 (0)	5 (100.0)	12 (92.3)	52 (89.7)	9 (90.0)	
<b>The availability of contraception methods</b>						
Complete	0 (0)	5 (100.0)	13 (100.0)	58 (100.0)	10 (100.0)	N/A*
Not complete	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	

<sup>a</sup>Anova test; <sup>b</sup>Kruskal-Wallis test; <sup>c</sup>Kolmogorov-Smirnov test; \*cannot be analyzed

From this study, we found that in Raden Saleh Clinic and Fatmawati general hospital IUD is still the favorite choice of contraceptive method (66% and 67%, respectively), followed by the implant method as the second most frequent choice (23% and 15%, respectively). The sterilization method is more commonly encountered in Fatmawati general hospital than Raden Saleh Clinic (12% vs 2%, respectively). The role of the midwife and her husband or family in determining the type of contraception is very large, where most of them chose IUD as their preference.

From the eleven factors that influence the selection of contraception in Raden Saleh Clinic, we found no factor that were statistically significant in affecting their choice ( $p > 0.05$ ). In Fatmawati general hospital, the number of desired children had a statistically significant relationship with the selection of contraceptive methods ( $p < 0.05$ ), while the other factors were not statistically significant. Most of the subjects ( $n = 140$ , 92.7%) chose to use contraception that still retained their fertility due to the desire of having more children.

We also found that the age of the wife, education level, religion, husband's opinions, the person who helped in selecting the contraceptive methods, the number of desired children, age when having the first child, medical problems, previous experience with contraception side effects, the availability of contraception, and the suitability of choice is not proven to be statistically significant ( $p > 0.05$ ) in influencing the duration of contraceptive use in both Raden Saleh clinic and Fatmawati general hospital. The tendency to use their contraceptive method for less than 6 months is higher for subjects in Raden Saleh clinic than in Fatmawati general hospital (70% vs. 30%).

We found 10 subjects (6.6%) who switched their contraceptive methods. The changes of contraceptive methods is presented in Table 2. From all of them, there is a tendency of switching from oral contraceptive to injection method (33.3%) and from IUD to injection method (66.7%).

## DISCUSSION

In the effort of controlling the rate of population growth in Indonesia, family planning is one right way to cope with the population explosion in the future. Family planning programs can be done through traditional or modern ways. Traditional contraceptive methods include coitus interruptus and periodic abstinence,<sup>10</sup> while modern contraceptive methods include oral contraceptives, injectables, IUD, implants, condoms and lactation method.

From the 152 subjects recruited, there was one patient who was dropped out from this study due to loss of contact. The average age of our subjects was 31.38 years old. Most of subjects were recruited in Fatmawati general hospital ( $n = 86$ ). Based on educational level, the subjects mostly belonged in the category of middle education (junior-senior high school) and most of them were Moslem (90.7%). In this study, the husband mostly agreed with his wife having contraception (99.3%), where there was only one subject whose husband did not agree. The most common contraceptive method selected by the subjects was IUD (66.9%), followed by implants (18.5%). This is consistent with the results of the Indonesia Health Research in 2013, where the use of long-term contraceptive methods (IUD, implant, sterilization) has a higher distribution (49.1%) compared to the short-term contraceptive methods (10.2%).<sup>3</sup>

**Table 2.** The Changes in Contraceptive Methods

Previous contraceptive method	New contraceptive method							
	Oral		Injection		IUD		Didn't change	
	n	%	n	%	n	%	n	%
Oral	0	0.0	2	33.3	1	100.0	3	2.1
Injection	1	33.3	0	0.0	0	0.0	4	2.8
Implants	0	0.0	0	0.0	0	0.0	28	19.9
IUD	2	66.7	4	66.7	0	0.0	95	67.4
Sterilization	0	0.0	0	0.0	0	0.0	11	7.8

In helping clients choose the type of contraception in accordance to the client's condition, good counseling is necessary so that the client can use a contraceptive choice for longer and increase the success rate of contraception.<sup>5</sup> From the many factors that have been studied previously, this study only examined several factors, namely the family planning factors (the age of the wife, number of desired children, and infertility), the subjective factors (experience with contraception side-effects, support from the husband/the family, and religion), the objective factors (medical problems, the person helping in choosing contraception, the place of contraceptive services, and the availability of contraceptive methods) and the motivation level (education level).<sup>6-9</sup>

The median age of the subjects who chose the IUD was 31 years, while the median age of the subjects who chose contraceptive implant and sterilization were 32.5 years and 36 years, respectively. It can be seen that the age of subjects who chose sterilization is older than other contraceptive methods. The reasons of getting contraception in this study include preventing pregnancy (62.9%), adjusting the interval between pregnancies (26.5%), not wanting to have any more children (7.3%), and following the instructions of the midwife or doctor (3.3%).

At Raden Saleh clinic, the most commonly selected contraceptive method is IUD, followed by implant, oral contraceptives, and sterilization. Meanwhile, in Fatmawati general hospital the most preferred contraceptive method is IUD, followed by implants, injections and sterilization. It seems that IUD is still the most favourite contraceptive method in both of the health care centers because of its high effectivity (99%).<sup>11-13</sup> The role of the midwife and husband/family in helping to select the contraceptive methods suitable for the client is very large, compared to general practitioners and specialists (Ob-Gyns) (85.4% vs. 14.6%). There were only 19 subjects (12.5%) who have experienced getting contraception previously. The side effects experienced by the subjects were menstrual disorders, vaginal discharge, acne and weight gain.<sup>14,15</sup>

After statistical analysis to connect the factors studied to the selection of contraception methods, we obtained that only the number of desired children carry an influence on the selection of contraceptive methods ( $p=0.008$ ) in Fatmawati general hospital. Whereas in Raden Saleh Clinic, all of the

factors studied had no significant effect ( $p>0.05$ ) on the selection of contraception. This is consistent with research conducted by Kusumaningrum et al in Batang district in Central Java in 2008, which stated that the age of wife, the number of desired children and the level of education has a significant relationship with the selection of contraception, while the support of family and religion do not have a significant influence.<sup>9</sup> In this study, the age of the wife and educational level did not have a statistically significant influence on the selection of contraceptive method due to differences in the characteristics of the subjects and places. All of those factors do not affect the duration of contraceptive use, both in Raden Saleh Clinic and Fatmawati general hospital. So far, there has been no studies linking these factors to the duration of contraceptive use. This is possibly because the follow-up period is too short, so that the possibility of subjects switching their contraceptive methods is minimal. Furthermore, the contraceptive side effects are subjective, so it will differ in severity and time. Therefore, it requires further study with a larger sample size and a longer follow-up period to determine the factors that may influence the contraceptive use duration.

Nevertheless we found that in the Raden Saleh Clinic, there is a greater tendency to use contraception for less than 6 months than in Fatmawati general hospital because there are differences in subject characteristics and motivation in both of those centres. In Raden Saleh Clinic, clients receive contraception mostly after menstrual induction due to a variety of reasons; while at Fatmawati general hospital most of them had postpartum contraception, so it is reasonable that subjects would use their contraception longer.

From ten subjects who switched the method of contraception, two subjects replaced the contraceptive method at less than six months due to menstrual disorder and vaginal discharge, while the eight subjects who switched the type of contraception in the next 6 months also stated the same reasons. This study found a tendency of switching from oral contraceptives to injectable method (33.3%) and from IUD to injection (66.7%). The education level of the subjects who changed their contraceptive method is mostly basic education level (70%) and the rest was middle education level (junior-senior high school). This phenomenon can be explained by the lack of understanding on the benefit and importance of contraception to im-

prove the health of women and the low level of motivation for using contraception.

Good counseling to clients before receiving contraception will increase the level of understanding and motivation level of the importance of family planning, so that the client can determine the choice of contraceptive method in accordance with their preference. This will indirectly affect the duration of contraceptive use by the client.

### CONCLUSION

In Fatmawati general hospital, we obtained that the number of desired children was confirmed to significantly affect the selection of contraceptive methods; whereas the age of wife, infertility, experience with contraception side effects, the support of husband/family, religion, medical problems, person helping to choosing contraception, the availability of contraception and education levels do not carry a significant influence in the selection of contraceptive methods. Meanwhile in Raden Saleh Clinic, all of the factors that we studied do not affect the selection of contraceptive methods.

All of the factors studied do not affect the duration of contraception use in either of the centres. There is a tendency for subjects in Raden Saleh Clinic to use their contraception for less than 6 months more often than in Fatmawati general hospital. There were subjects who switched their method from oral contraceptive to injection method and from IUD to injection.

Further studies with a larger sample size and longer follow-up period is needed in order to determine the factors influencing the duration of the contraceptive use.

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