

## DETERMINANTS OF CONTRACEPTIVE USE IN NTB PROVINCE BASED ON THE 2019 SKAP DATA ANALYSIS

\*Sudarmi<sup>1</sup>, Linda Meliati<sup>1</sup>, Siti Halimatusyaadiah<sup>1</sup>

<sup>1</sup>Politeknik Kesehatan of the Ministry of Health of Mataram, 83232 Mataram, West Nusa Tenggara, Indonesia

\*Corresponding Author: Sudarmi : Email: [Sudarmiude123@gmail.com](mailto:Sudarmiude123@gmail.com)

Published by Fakultas Kesehatan Masyarakat Universitas Airlangga

### ABSTRACT

#### Keywords:

determinant factors  
women of childbearing  
age,  
using contraceptive  
methods

Prevention of pregnancy by various contraceptive methods remains an important part of medical practice and can occur during any reproductive cycle. The more types of contraceptive methods available, the more choices of contraceptive methods available for people. Many determinant factors cause women of childbearing age to choose contraceptives that suit their needs. This study aims to determine the determinants affecting women of childbearing age using contraceptives in West Nusa Tenggara Province. The design of this study is an analytical study (descriptive analysis) with a cross-sectional approach using secondary data from the 2019 SKAP Family Planning and Family Development Population Accountability Performance Survey (KKBPK) in the Province of West Nusa Tenggara (NTB). Data were analyzed using bivariate analysis using Chi-Square and multivariate with logistic regression. The results showed that the determinants that affect women of childbearing age in using contraceptive methods include: unmet need, age, parity, previous family planning experience, decision-making, knowledge, and visits to health facilities. The results of multivariate analysis of the most dominant decision-making factors influencing the use of contraceptive methods in women of childbearing age with an OR value of 174,666. It can be interpreted that the decision-making ability of women of childbearing age is 174,666 times more influencing the use of contraceptive methods compared to other variables. This study recommends empowering women of childbearing age through increasing knowledge by maximizing the individual counseling process so that women of childbearing age can choose contraceptive methods according to their needs.

### ABSTRAK

#### Kata kunci:

faktor determinan,  
Wanita Usia Subur,  
menggunakan metode  
kontrasepsi

Pencegahan kehamilan dengan berbagai metode kontrasepsi tetap menjadi bagian terpenting dari praktik kedokteran dan dapat terjadi pada setiap siklus reproduksi. Semakin banyak jenis metode kontrasepsi yang tersedia, maka semakin banyak pula pilihan yang dapat dilakukan oleh masyarakat dalam memilih metode kontrasepsi. Terdapat banyak faktor determinan yang menyebabkan Wanita Usia Subur memilih alat kontrasepsi yang sesuai dengan kebutuhannya. Penelitian ini bertujuan untuk mengetahui determinan Wanita Usia Subur menggunakan metode kontrasepsi di Provinsi Nusa Tenggara Barat. Desain penelitian ini adalah penelitian analitik (analisis deskriptif) dengan pendekatan cross sectional menggunakan data sekunder hasil Survei Kinerja Akuntabilitas Program Kependudukan Keluarga Berencana dan Pembangunan Keluarga (KKBPK) SKAP Tahun 2019 di Provinsi Nusa Tenggara Barat (NTB). Data dianalisis dengan menggunakan analisis bivariat dengan menggunakan Chi-square dan multivariat dengan regresi logistik. Hasil penelitian menunjukkan determinan Wanita Usia Subur dalam menggunakan metode kontrasepsi meliputi: unmet need, umur, paritas, pengalaman Keluarga Berencana (KB) sebelumnya, pengambilan keputusan, pengetahuan dan kunjungan ke fasilitas kesehatan. Secara multivariat faktor pengambilan keputusan yang paling dominan mempengaruhi penggunaan metode kontrasepsi pada Wanita Usia Subur dengan nilai OR 174.666, menunjukkan bahwa kemampuan pengambilan keputusan pada Wanita Usia Subur 174.666 kali lebih mempengaruhi penggunaan metode kontrasepsi dibandingkan dengan variabel lainnya. Penelitian ini merekomendasikan pemberdayaan Wanita Usia Subur melalui peningkatan pengetahuan dengan cara memaksimalkan proses konseling individu agar Wanita Usia Subur dapat memilih metode kontrasepsi sesuai dengan kebutuhannya.

## INTRODUCTION

Efforts to realize balanced population growth, regulate childbirth spacing, distance, and age at birth, and regulate pregnancy through promotion and assistance under reproductive rights to create a quality family are the goals of the family planning program through three priority focuses.

The first focus is a program for the revitalization of family planning. The second one is the harmonization of population control policies. The third focus is increasing the availability and quality of adequate, accurate, and timely population data and information according to Law No. 87 of 2014 (1).

Prevention of pregnancy by various methods of contraception remains an important part of medical practice which can occur in every basic biological process of the reproductive cycle. Contraceptive methods are categorized based on hormonal and non-hormonal content. Hormonal options include oral contraceptive pills, injections, and implants. Non-hormonal, including Intra-Uterine Devices (IUD) and condoms, can prevent pregnancy by creating a barrier to the successful fertilization of the egg by the sperm. The proper position of healthcare providers can assist patients in selecting the appropriate method of contraception based on the need by counseling methods (2,3).

The more contraceptive methods available today, the more choices available for people in selecting a contraceptive method. Furthermore, factors that influence the choice of the contraceptive method include; lack of knowledge, costs, family support, and family income. The most dominant factors are family support, costs, and family income. Worldwide coverage of use describes the effectiveness of different types of contraception, characteristics of women using contraceptives, situations of contraceptive failure, and medical risks associated with contraceptive methods (2).

The coverage of contraceptive use in France is very high at around 97 including medical methods, 72% using the pill and other hormonal contraception, and 25% using the IUDs and simple methods. Another study also reported that the use of long-acting reversible contraception (LARC) was only 32% lower than that of non-MKJP methods (non-LARC), which was 45%, while in India, it was reported that one-fifth of the study population used

contraceptive methods. Modern methods include the use of pills and injections and a small proportion choose steady contraception (4-7).

Survey results reported from Indonesia Demographics in Health Survey (IDHS) data in 2017 stated that overall, 64% of women of reproductive age in Indonesia used contraceptive methods; 57% used modern methods, and 6% used traditional methods. The most commonly preferred method was injection (29%) and it was followed by pills (12%). Implants and IUDs are used by 5% of women, respectively. Only 14% of married women of reproductive age use the four long-term methods recommended by the population, Family Planning and Family Development Program (KKBPK), namely implants, IUDs, and female and male sterilization (8).

In contrast to the IDHS (2017) results, the 2019 Population, Family Planning, and Prosperous Family Program Performance and Accountability Survey (*SKAP*), the Contraceptive Prevalence Rate (CPR) in Indonesia is around 58.71%. The highest rate was in South Kalimantan (67.5%), followed by *Daerah Istimewa Yogyakarta* (66.3%), while the lowest one was Papua (13.7%). In comparison, the percentage for NTB Province was 57.7%, which is lower than the national average Contraceptive Prevalence Rate (CPR), while the total national fertility rate was 2.45%. However, in NTB, the Total Fertility Rate (TFR) is higher than the national figure which reaches 2.84. Meanwhile, the highest use of modern contraception, mixed CPR injection, was 52.8%, followed by pills (19.2%), implants (9.3%), IUDs (8.4%), female sterilization (6.7%), male condoms (3%), and Lactational Amenorrhea Method (LAM) and male sterilization (0.2%) (9).

Many determinant factors cause women of reproductive age to choose contraceptives that suit their needs. There was only 10% of acceptors use long-term contraceptive methods in NTB Province, while most of them (77.2%) still use short-term methods. This is due to the low motivation of women of childbearing age to use contraception, fear of side effects, discomfort, and lack of availability of contraceptives. So we need quality counseling that can strengthen the preferences for effective contraception. Acceptance of quality postpartum

contraception counseling was reported to be 26% in three months postpartum; while 70% of participants reported the same contraceptive preference based on their stated effectiveness category at the time of delivery. Quality counseling was associated with a lower likelihood of choosing a less effective method and switching to an IUD or implant. Other related determinants of dual method use in multivariable analysis were age <25 years, black race, low education, single relationship status, use of multiple baseline methods, basic diagnosis of sexually transmitted infections (STIs), the greater willingness of partners to use condoms, and higher condom self-efficacy scores. Another study found that women who choose oral contraceptives and IUDs valued efficiency and spontaneity, while those who choose diaphragmatic contraceptives reported no risks or side effects. The most dominant factor influencing the choice of contraception are age and experience in using other methods (6),(10),(11),(12).

The results of the study identified four determinant factors that influence the choice of contraceptive use including 1) personal; 2) specifically for IUD devices; 3) health care providers; and 4) social networks. Women of childbearing age prefer the IUD at a young age because of its effectiveness and convenience whereas their choice also influences it because of the elements of contraception counseling from doctors and family support, especially mothers (13). The results of a study conducted in East Java showed that the use of long-term contraceptive methods was associated with age, education, number of children, knowledge, and involvement of the husband. Meanwhile, the area of residence and socioeconomic status do not affect the use of long-term contraceptive methods. While in NTB, for most women of childbearing age (77.2%), changing contraceptive methods is still within the scope of non-long-term contraceptive methods. Moreover, those who switch from non-long-term contraceptive methods to long-term contraceptive methods do not reach 10%. It is known that the factors of change in family planning motivation, perceptions of side effects, discomfort, and difficulty in using contraceptives are significantly related to the pattern of changing contraceptive methods (13–15).

Knowing the determinants that cause women of childbearing age to use one method

of contraception using survey results with a large enough number of samples through a household approach makes it easier for service providers to increase the coverage of the Contraceptive Prevalence Rate (CPR). West Nusa Tenggara is one of the provinces in Indonesia with a low CPR rate of 57.7% and a Total Fertility Rate above the national figure of 2.84. This means that in NTB, the average woman of childbearing age can give birth to as many as 3 children. In addition to low CPR and high TFR, the unmet need rate is also considered the second-highest at the national level after Papua Province, which reaches 17.4%. This indicates that there are still many women of childbearing age who have not used a contraceptive method, even though they still need it (9).

The minimum use of contraceptive methods in the Province of NTB and the high dropout rate for active family planning are caused by problems in acceptors' perceptions of the use of contraceptive methods. There are still many women of childbearing age who have a bad perception of the existence of myths from socio-cultural society such as the use of IUD and implant contraceptives, which can interfere with daily activities, husbands forbidding their wives to use contraceptives, and their beliefs or religions that prohibit. Many acceptors do not want to use the contraceptive pill because they often forget and are lazy to take it every day. Besides, the prevalence of early marriage is still quite high at around 23.9% which will have an impact on increasing the Total Fertility Rate (16–19). The purpose of this study was to determine the determinants of factors that influence women of reproductive age in determining the use of contraceptive methods in the province of West Nusa Tenggara to strengthen the policy strategy for promoting family planning programs so that acceptors can choose contraception according to their needs.

## METHOD

The design of this study is an analytical study (descriptive correlation) with a cross-sectional approach, where it connects the determinants of women of reproductive age to the choice of contraceptive method use based on data from the Population, Family Planning and Family Development (PFDP)

Program Accountability Performance Survey (SKAP 2019) which has received permission (20). The target population in this study was all women of reproductive age based on the Family Development Population Accountability Performance Survey data in West Nusa Tenggara Province, while the sample of this study was the total population of women of childbearing age with approximately 1,583 people.

Univariate analysis was used to analyze the frequency distribution of all research variables, namely the characteristics of each determinant of women of childbearing age who have been married with an age range of 15 to 50 years. Furthermore, bivariate analysis was carried out to see the relationship between the determinants of women of reproductive age and the variable using contraceptive methods using the chi-square test with a significance level ( $p < 0.05$ ). Then, in the multivariable analysis, multiple logistic regression tests were employed with the risk factor model to measure all variables together with determinants of women of reproductive age on the use of contraceptive methods after controlling for several significant confounding variables. Only the final model will be discussed in this study. Ethical approval of this study was obtained from

the Faculty of Medicine, University of Mataram (No: 175/UN18.f7/ETIK/2021).

## RESULT

This study is a secondary data study that analyzes 2019 SKAP data on the influence of determinants of women of childbearing age in choosing contraceptives in West Nusa Tenggara Province with the following research results. The results showed that most women of childbearing age were at-risk age group ( $>35$  years old) with 868 people (54.8%), attending school 1.539 people (97.2%), mostly not working/housewives as many as 965 people (61.0%) and with parity  $\leq 2$  children as many as 1203 people (76.0%). Furthermore, most women of childbearing age are in the unmet need group with 1.109 people (70.1%), having health insurance as many as 1.580 people (99.8%), have experience using contraceptives with 1.110 people (70.1%), cannot make decisions in using contraceptives reach 812 people (51.3), getting information about family planning from the media as many as 1.536 people (97.0%), having good knowledge with 849 people (53.6%), visiting health facilities with 1.015 people (64,1%) and did not use contraception as many as 871 people (55.0%). The percentage of each determinant of women of childbearing age can be seen in Table 1.

**Table 1.** Data on Determinants of Women of Childbearing Age in West Nusa Tenggara Province in 2019

Variable	Amount	
	n	%
<b>Age</b>		
No-Risk	715	45.2
at risk	868	54.8
<b>Education</b>		
No school	44	2.8
School	1539	97.2
<b>Profession</b>		
Does not work	965	61.0
Work	618	39.0
<b>Parity</b>		
$\leq 2$	1203	76.0
$> 2$	380	24.0
<b>Women of childbearing age Unmet need</b>		
Meet need	1109	70.1
Unmet need	474	29.9

Variable	Amount	
	n	%
<b>Health insurance ownership</b>		
Not	3	0.2
Yes	1580	99.8
<b>Experience use contraceptives</b>		
Never Use	473	70.1
Have Use	1110	29.9
<b>Decision-making</b>		
No self-decision	812	51.3
Self-decision	771	48.7
<b>Media information</b>		
No access	47	3.0
Have access	1536	97.0
<b>Family planning knowledge</b>		
Not good	734	46.4
Good	849	53.6
<b>Health facility visit</b>		
Never	568	35.9
Ever	1015	64.1
<b>Use of contraceptives</b>		
No contraceptive acceptor	871	55.0
Contraceptive acceptor	712	45.0

Based on the results of this study, shows that there are many determinant variables influencing women of childbearing age in using contraceptive methods including unmet need women of childbearing age, age,

parity, previous family planning experience, decision-making, knowledge, and visits to health facilities. The results of the bivariate analysis of each determinant of women of childbearing age are displayed in Table 2.

**Table 2.** The Effect of Determinants of Women of Childbearing Age on the Use of Contraceptive Methods in West Nusa Tenggara Province in 2019

Variable	Contraceptive Method				P-value	OR	IK95%	
	No		Yes				Min	Max
	n	%	n	%				
<b>Women of Childbearing Age</b>								
Meet need	398	45.7	711	99.9	0.000	0.001	0.000	0.008
Unmet need	473	54.3	1	0.1				
<b>Age</b>								
No-risk	355	40.8	360	50.6	0.000	0.673	0.551	0.821
at risk	516	59.2	352	49.4				
<b>Education</b>								
No school	23	2.6	21	2.9	0.710	0,892	0.490	1.626
School	848	97.4	691	97.1				
<b>Parity</b>								
≤ 2	743	85.3	460	64.6	0.000	3.180	2.495	4.052
> 2	128	14.7	251	35.4				
<b>Profession</b>								
Does not work	541	62.1	424	59.6	0.299	1.114	0.909	1.364
Work	330	37.9	288	40.4				

Variable	Contraceptive Method				P-value	OR	IK95%	
	No		Yes				Min	Max
	n	%	n	%				
<b>Health insurance ownership</b>								
Not	2	0.2	1	0.1				
Yes	869	99.8	711	99.9	0.685	1.636	0.148	18.083
<b>Experience use contraceptive</b>								
No have	473	54.3	0	0				
Have	398	45.7	712	100	0.000	2.789	2.578	3.017
<b>Decision-making</b>								
No self-decision	795	91.3	17	2.4				
Self-decision	76	8.7	695	97.6	0.000	427.651	250.310	730.634
<b>Media information</b>								
No access	29	3.3	18	2.5				
Have access	842	96.7	694	97.5	0.350	1.328	0.731	2.412
<b>Family planning knowledge</b>								
Not good	462	53.0	272	38.2				
Good	409	47.0	440	61.8	0.000	1.827	1.494	2.235
<b>Health facility visit</b>								
Never	356	40.9	212	29.8				
Ever	515	59.1	500	70.2	0.000	1.630	1.322	2.011

SKAP 2019 data source

**Table 3.** Multivariate Data Analysis Multivariate Modeling the First Step Determinants of Factors Affecting Women of Childbearing Age on the Use of Contraceptive Methods in West Nusa Tenggara Province

Variable	Coefficient	p value	OR (IK95%)
Parity	0.394	0.101	1.483 (0.927-2.373)
Family Planning Experience	18.137	0.992	7.533E7 (0.000)
Decision-making	5.156	0.000	173.454 (100.596-299.078)
Health facility visit	5.163	0.574	0.878 (0.557-1.383)
Constant	-21.162	0.991	0.000

After the bivariate analysis was carried out, several variables that met the requirements for multivariate analysis were formulated, then stage 1 (Step 1) and stage 2 (Step 2) tests were done with a p value = (<0.025) which can be seen in Tables 3 and 4.

Based on Table 3 above, it is clearly shown that the largest p value is health facility visits so the first thing excluded from the first

modeling is health facility visits. After removing the health facility visit variable from the first step modeling, the results of the multivariate analysis can be seen from the odds ratio (OR) value where the greater the odds ratio value means the greater the influence on the dependent effect being analyzed. The results of the second step modeling are as written in Table 4.

**Table 4.** Multivariate Data Analysis Multivariate Modeling Second Step Determinants of Factors Affecting Women of Childbearing Age on Unwanted Pregnancy in West Nusa Tenggara Province

Variable	Coefficient	P value	OR (IK95%)
Parity	0.399	0.096	1.491 (0.932-2.385)
Family planning experience	18.144	0.992	7584E7 (0.000)
Decision-making	5.163	0.000	174.666 (101.322-301.102)
Constant	-21.218	0.991	0.000

Based on the analysis of the logistic regression model in Table 4 which involves three determinant variables that affect the use of contraceptive methods in women of childbearing age, the decision-making variables that most dominantly affect the use of contraceptive methods in women of childbearing age have the highest OR value of 174,666. It can be interpreted that the decision-making ability of women of childbearing age is 174,666 times more influencing the use of contraceptive methods compared to other variables.

## DISCUSSION

This study analyzes the determinants of women of childbearing age using contraceptive methods, including age, education, occupation, parity, unmet need, health insurance, family planning experience, decision-making, information media, knowledge, and visits to health facilities. The results of this study indicate that unmet need affects the use of contraceptive methods. Many women who are not likely to get pregnant or are willing to delay their pregnancy but do not use contraception, even though they are sexually active, indicate that their preferences regarding the need for contraception have not been met. It was stated that NTB was the province with the second-highest number of unmet need events after Papua Province in Indonesia (17.4%) while the government targets a 12.1% reduction in the number of unmet needs. This will have an impact on decreasing the number of users of family planning acceptors and will increase the Total Fertility Rate (TFR). This high level of unmet need, in line with previous research in Ethiopia, requires strategic intervention efforts to improve communication and cooperation between women and their partners to achieve family planning programs (21).

In addition, the use of contraceptive methods in this study was also influenced by age. Most of the women of reproductive age in this study were in the risky age group (54.8%) but most of the women of reproductive age were at risk in regard to not using contraceptive methods compared to women of reproductive age. It is known that the age range at risk affects the risk of adverse pregnancy, especially the risk of unwanted

pregnancy related to physiological function, organ structure, biochemical composition, and hormonal system. Differences in age cause differences in the selection of contraceptives needed (22,23).

There were only 50.6% of women the age that is not at risk in the range (20-35 years) in this study. It is in this age range that peak fertility can occur, so the use of contraceptive methods is very necessary for spacing pregnancies. The most commonly used contraceptive method in the United States are condoms and oral contraceptives, and this is the choice of women of reproductive age in the younger group of women aged <20 years compared to the use of Long Acting Reversible Contraception (LARC). Related to the age of women of reproductive age, another study also found that the use of long-term contraceptive methods was significantly lower in adolescents and women over 40 years of age compared to those aged >20 years (24,25).

The parity or number of children in this study also affected the use of contraceptive methods; most of them (76.0%) with parity  $\leq 2$  and 85.3% did not use contraception. Mothers with a parity of less than 2 should also become contraceptive users to regulate or space their pregnancies. Previous studies have stated that there is a relationship between parity and low interest in using contraceptives, especially steady contraception, where which leads to the difficulty found by many prospective acceptors to make their choices (26).

In addition to the above, parity is less than 2, and women of childbearing age have reasons to have more children, so they do not use family planning. Another study found that the number of children living was significantly related to contraceptive use. Women with one child tend to use contraception only 7-8% compared to women who have had three or more children. Another study also found that individual factors such as the number of living children (five children or more), the deal number of children (two children), and the desire to have more children were significantly associated with the use of modern contraceptive methods (3,21). This study also reported that the experience of using contraception was significantly related to  $p=0.000$  ( $<0.05$ ) with the use of contraceptive methods. A pleasant experience about one contraceptive method that has been used will

influence the mother to reuse the contraceptive. This is also the same as the results of previous studies that there is a relationship between the previous experience of using contraception and the use of implant contraceptive methods that almost all women who use contraception want the best and without side effects from the contraception they use (27,28).

This study also found that the experience of using contraception was significantly related to  $p = 0.000$  ( $<0.05$ ) with the use of contraceptive methods. Previous research in Mataram City, the capital city of NTB province, showed that the choice of contraceptive method use was determined by the influence of the mother's perception and attitude towards the previous contraceptive method, for example, multiparous users of post-partum IUD contraception were more likely chosen than primiparas. Other studies explain the previous positive experiences of IUD users, such as acceptors knowing the impact of the IUD on themselves and their partners, the impact of the IUD on the menstrual cycle, the ease of using the IUD to determine the fertile period, and it is effective because it is only inserted once. A pleasant experience about one contraceptive method that has been used will influence the mother to reuse the contraceptive. This is also the same as the results of previous studies that show a relationship between the experience of using previous contraception and the use of the contraceptive implant method where almost all women who use contraception want the best result and without any side effects from the contraception (29–31).

Another variable that is considered significantly related is decision-making. Decision-making is very pivotal, hence women of reproductive age can choose and decide which contraceptive method to use. Results of this study showed that there is a significant relationship between decision-making and the use of contraceptive methods and all women of childbearing age who can make their own decisions, 97.5%, use contraceptive methods and are statistically significant with  $p$  value= $0.000$  ( $p <0.05$ ).

Decision-making in this study is a decision taken by women of reproductive age alone and/or together with their husbands to decide on the contraceptive method to be used. This study is in line with previous research,

which states that the use of modern contraceptive methods is better for married women who have good decision-making abilities (27).

This study was analyzed based on the analysis of logistic regression models involving three determinant variables that affect the use of contraceptive methods in women of childbearing age, it is this decision-making variable that most dominantly affects the use of contraceptive methods in women of reproductive age with the highest odd ratio value of 174,666. It can be interpreted that the decision-making ability of women of reproductive age is 174,666 times more, influencing the use of contraceptive methods compared to other variables. This research proves that increasing independence and involvement in decision-making will change health behavior. Another multivariate analysis study also showed that self-decision patterns were significantly associated with long-term use of contraceptive methods (12).

The ability of women of reproductive age in making decisions to determine the contraceptive method that suits them is the result of their knowledge of various types and methods of contraception that they can use, such as effective contraceptive methods, namely: pills, condoms, injections, implants, and IUDs and even women of reproductive age knowledge about simple methods were also studied in this study such as the bead bracelet method in the form of a bead bracelet used to determine the fertile days/periods in one month, the intravaginal/diaphragmatic method, the lactational amenorrhoea method/breastfeeding method for family planning, the periodic/calendar abstinence method, and periodic abstinence method. Based on the results of the study showed that 53.6% of respondents had good knowledge of contraceptive methods, and 61.8% of respondents with good knowledge of using contraceptive methods. Statistically showed a significant relationship  $p=0.000$  ( $p <0.05$ ).

This study is in line with research that has been carried out in the Province of West Nusa Tenggara which states that the perception of family planning acceptors plays a very important role in their pattern of switching contraceptive methods, from short-term contraceptive methods to long-term



contraceptive methods. Perceptions in this study include respondents' knowledge of the side effects of the device, ease of use of the device, and the cost of contraception (32). There were reported in other studies that it is argued that not only the perception of family planning acceptors will be a consideration for service providers, but it is necessary to consider the medical condition of the prospective acceptor. Decision-making uses a patient-involved approach to ensure they choose contraceptives that are appropriate for their reproductive health (3).

Efforts to involve women in determining the choice of contraception use are by increasing counseling during antenatal care and services during delivery. This counseling activity is effective in increasing the use of postpartum IUDs. Counseling intervention services can be improved in time and quality (33).

Most couples of childbearing age get reliable sources of information about contraception from health workers (midwives and doctors). The information they obtain affects the use of contraceptive methods. Good counseling skills are needed, to increase cooperation with women and their partners to make the right decisions about effective contraceptive options to reduce unwanted pregnancies (34). Another variable related to the use of contraceptive methods in this study was visited health facilities. Most of the foreign domestic workers (64%) in this study made visits to health facilities, and 72% of foreign women used contraceptive methods. Statistically showed a significant relationship  $p=0.000$  ( $p < 0.05$ ).

The visits to health facilities referred to in this study were whether women of reproductive age visited health facilities for medical examinations and whether the health facilities visited by officers also discussed contraceptive methods. It is intended that for women of reproductive age who visit health facilities, officers always provide information about contraceptive methods that aim to increase the coverage of contraceptive method use and reduce the number of unmet needs. The results of other people's research found that one of the factors that influence women of reproductive age to use contraceptive methods is health service providers, namely health facilities. Research participants described that health workers were the most influential

individuals during the decision-making process, especially on intrauterine devices (IUDs) through the provision of reliable and accurate contraceptive information and health workers providing contraceptive demonstrations (13).

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on the results of this study, it is concluded that the determining factors influencing women of reproductive age using contraceptive methods are unmet needs of women of childbearing age, age, parity, previous family planning experience, decision-making, knowledge, and visits to health facilities, and the most influential decision-making factors compared to other factors.

Based on logistic regression analysis involving three determinant variables that affect the use of contraceptive methods in women of childbearing age including parity, family planning experience, and decision-making. The variable that has the most dominant influence on the use of contraceptive methods is the decision-making variable with the highest OR value of 174,666 times having more effect on the use of contraceptive methods compared to other variables.

### Suggestions

This study recommends empowering reproductive-age women through increasing knowledge by maximizing the individual counseling process so that women can choose contraceptive methods according to their needs. Contraceptive service providers might be able to provide recommendations to acceptors in determining the choice of contraceptive use according to age, parity, and previous experience to assist the decision-making process.

## ACKNOWLEDGEMENT

The author would like to thank the Director of *Politeknik Kesehatan* of the Ministry of Health of Mataram, Head of National Population and Family Planning Board, West Nusa Tenggara Province Indonesia for assisting us in this research.

## REFERENCES

1. Ministry of Law and Human Rights. Peraturan Pemerintah Republik Indonesia Nomor 87 Tahun 2014 tentang Perkembangan Kependudukan dan Pembangunan Keluarga, Keluarga Berencana, dan Sistem Informasi Keluarga. Presiden Republik Indonesia. 2015. Available from: <https://peraturan.bpk.go.id/Home/Details/5531>
2. Colquitt CW, Martin TS. Contraceptive Methods: A Review of Nonbarrier and Barrier Products. *J Pharm Pract* [Internet]. 2017;30(1):130–135. Available from: <https://doi.org/10.1177/0897190015585751>
3. Woodhams EJ, Gilliam M. Contraception. *Ann Intern Med* [Internet]. 2019;170(3):ITC18–32. Available from: <https://doi.org/10.7326/AITC201902050>
4. Hanafi F. Pemilihan Metode Kontrasepsi oleh Ibu Akseptor KB. *J Kedokt* [Internet]. 2019;4(2):55–62. Available from: <http://dx.doi.org/10.36679/kedokteran.v4i2.105>
5. Vigoureux S, Le Guen M. Current Knowledge on Contraceptive Knowledge in France: CNGOF Contraception Guidelines. *Gynécologie Obs Fertil Sénologie* [Internet]. 2018;46(12):777–785. Available from: <https://doi.org/10.1016/j.gofs.2018.10.005>
6. Bernard C, Zhao Q, Peipert JF. Dual Method Use among Long-Acting Reversible Contraceptive Users. *Eur J Contracept Reprod Heal Care* [Internet]. 2018;23(2):97–104. Available from: <https://doi.org/10.1080/13625187.2018.1445850>
7. Pradhan MR, Patel SK, Saraf AA. Informed Choice in Modern Contraceptive Method Use: Pattern and Predictors among Young Women in India. *J Biosoc Sci*. 2020;52(6):846–859. Available from: <https://doi.org/10.1017/S0021932019000828>
8. National Population and Family Planning Board, Central Bureau of Statistics, Ministry of Health, and ICF. Indonesia Demographic and Health Survey 2017 [Internet]. Jakarta, Indonesia: National Population and Family Planning Board, Central Bureau of Statistics, Ministry of Health, and ICF; 2018. Available from: <http://dhsprogram.com/pubs/pdf/FR342/FR342.pdf>
9. National Population and Family Planning Board. Survei Kinerja dan Akuntabilitas Program KKRPK. Jakarta: Puslitbang KB dan KS; 2020.
10. Coleman-Minahan K, Potter JE. Quality of Postpartum Contraceptive Counseling and Changes in Contraceptive Method Preferences. *Contraception* [Internet]. 2019;100(6):492–497. Available from: <https://doi.org/10.1016/j.contraception.2019.08.011>
11. Ayvazian A. Contraception Choices of Female University Students. *J Obstet Gynecol Neonatal Nurs* [Internet]. 1981;10(6):426–429. Available from: <https://doi.org/10.1111/j.1552-6909.1981.tb00986.x>
12. Mahendra IGAA, Wilopo SA, Sukamdi, Putra IGNE. The Role of Decision-Making Pattern on the Use of Long-Acting and permanent Contraceptive Methods among Married Women in Indonesia. *Eur J Contracept Reprod Heal Care* [Internet]. 2019;24(6):480–486. Available from: <https://doi.org/10.1080/13625187.2019.1670345>
13. Rubin SE, Felsher M, Korich F, Jacobs AM. Urban Adolescents' and Young Adults' Decision-Making Process Around Selection of Intrauterine Contraception. *J Pediatr Adolesc Gynecol* [Internet]. 2016;29(3):234–239. Available from: <https://doi.org/10.1016/j.jpag.2015.09.001>
14. Hariastuti I, Baroya N, Handini YR, Wicaksono DBC. Determinan Penggunaan Metode Kontrasepsi Jangka Panjang di Jawa Timur Tahun 2017. *BIOGRAPH-I* [Internet]. 2021;1(1):24–32. Available from: <https://doi.org/10.19184/biograph-i.v1i1.23619>
15. Amran Y, Damayanti R. Hubungan Antara Motivasi Keluarga Berencana dan Persepsi terhadap Alat Kontrasepsi dengan Pola Penggantian Metode Kontrasepsi di Nusa Tenggara Barat. *J Kesehat Reproduksi* [Internet].

- 2018;9(1):59–67. Available from: <https://ejournal2.litbang.kemkes.go.id/index.php/kespro/article/view/884/397>
16. Aldila D, Damayanti R. Persepsi terhadap Alat Kontrasepsi dengan Keputusan Penggunaan MKJP dan Non MKJP. *Hasanuddin J Midwifery*. 2019;1(2):58–65. Available from: <http://pasca.unhas.ac.id/ojs/index.php/hjm/article/view/2277>
  17. Ermi N. Penggunaan Kontrasepsi pada Pasangan Usia Subur saat Pandemi COVID-19 di Indonesia: Literature Review. *J Imiah AVICENNA*. 2021;16(2):53–63. Available from: <https://media.neliti.com/media/publications/375236-the-use-of-contraception-in-couples-of-r-8239af60.pdf>
  18. National Population and Family Planning Board. Laporan Kinerja Instansi Pemerintah. BKKBN [Internet]. 2020. Available from: [https://www.bkkbn.go.id/pocontent/uploads/LAKIP-2020-2021/LAKIP\\_BKKBN-TAHUN\\_2020.pdf](https://www.bkkbn.go.id/pocontent/uploads/LAKIP-2020-2021/LAKIP_BKKBN-TAHUN_2020.pdf)
  19. Aryanti H, Ani LS, Karmaya INM. Faktor-Faktor yang Berhubungan dengan Penggunaan Kontrasepsi pada Wanita Kawin Usia Dini di Kecamatan Aikmel, Kabupaten Lombok Timur. *Pub Heal Prev Med Arc*. 2014;2(2):189–197. Available from: <https://media.neliti.com/media/publications/21462-ID-factors-associated-with-contraceptive-use-among-early-married-couples-in-aikmel.pdf>
  20. Sastroasmoro S dan Ismael S. *Dasar-Dasar Metodologi Penelitian Klinis*. Jakarta: CV. Sagung Seto; 2011.
  21. Worku SA, Mittiku YM, Wubetu AD. Unmet Need for Family Planning in Ethiopia and Its Association with Occupational Status of Women and Discussion to her Partner: A Systematic Review and Meta-Analysis. *Contracept Reprod Med*. 2020;5(1):1–10. Available from: <https://doi.org/10.1186/s40834-020-00121-w>
  22. Jatlaoui TC, Riley HEM, Curtis KM. The Safety of Intrauterine Devices among Young Women: A Systematic Review. *Contraception*. 2017;95(1):17–39. Available from: <https://doi.org/10.1016/j.contraception.2016.10.006>
  23. Dewi PHC, Notobroto HB. Rendahnya Keikutsertaan Pengguna Metode Kontrasepsi Jangka Panjang pada Pasangan Usia Subur. *J Biometrika dan Kependud*. 2014;3(1):66–72. Available from: <http://journal.unair.ac.id/JBK@rendahnya-keikutsertaan-pengguna-metode-kontrasepsi-jangka-panjang-pada-pasangan-usia-subur-article-8582-media-40-category-3.html>
  24. Batur P, Bowersox N, McNamara M. Contraception: Efficacy, Risks, Continuation Rates, and Use in High-Risk Women. *J Women’s Heal* [Internet]. 2016;25(8):853–856. Available from: <https://doi.org/10.1089/jwh.2016.5942>
  25. Gomez-Marcos MA, Gomez-Sanchez L, Patino-Alonso MC, Recio-Rodriguez JI, Gomez-Sanchez M, Rigo F, Marti R, Agudo-Conde C, Maderuelo-Fernandez JA, Ramos R, Garcia-Ortiz L, Rodriguez-Sanchez E. Capacity Adiposity Indices to Identify Metabolic Syndrome in Subjects with Intermediate Cardiovascular Risk (MARK Study). *PLoS One* [Internet]. 2019;14(1):1–16. Available from: <https://doi.org/10.1371/journal.pone.0209602>
  26. Bahu R, Hasania E, Hिलamuhu F. Hubungan Paritas dan Dukungan Suami dengan Rendahnya Minat Penggunaan Alat Kontrasepsi Metode Tubektomi di Puskesmas Tibawa. *Akademika*. 2019;8(1):67–77. Available from: <http://dx.doi.org/10.31314/akademika.v8i1.299>
  27. Zegeye B, Ahinkorah BO, Idriss-Wheeler D, Olorunsaiye CZ, Adjei NK, Yaya S. Modern Contraceptive Utilization and Its Associated Factors among Married Women in Senegal: A Multilevel Analysis. *BMC Public Health* [Internet]. 2021;21(1):1–13. Available from: <https://doi.org/10.1186/s12889-021-10252-7>
  28. Gafar A, Suza DE, Efendi F, Has EMM, Pramono AP, Susanti IA. Determinants of Contraceptive Use among Married Women in Indonesia. *F1000Research* [Internet]. 2020;9:1–9. Available from: <https://doi.org/10.12688/f1000research.22482.1>
  29. Destiwi M. Penggunaan Metode Kontrasepsi Susuk KB di Jawa Timur

- (Analisis Data SUSENAS 2015). *J Biometrika dan Kependud* [Internet]. 2019;8(1):32–41. Available from: <http://dx.doi.org/10.20473/jbk.v8i1.2019.32-41>
30. Kisid K. Faktor yang Mempengaruhi Pemilihan IUD Pasca Plasenta pada WUS di Puskesmas Wilayah Kota Mataram. *J Penelit dan Kaji Ilm Kesehat Politek Medica Farma Husada Mataram*. 2021;7(1):38–43. Available from: <https://www.lppm.poltekmfh.ac.id/index.php/JPKIK/article/view/222>
  31. Dewi GNT, Nugroho RD, Dharmawan Y. Faktor Risiko yang Berhubungan dengan Penggunaan Metode Kontrasepsi Jangka Panjang pada Akseptor Wanita di Desa Lengkong Kecamatan Rakit Kabupaten Banjarnegara Tahun 2019. *J Kesehat Masy*. 2020;8(2):210–216. Available from: <https://ejournal3.undip.ac.id/index.php/jkm/article/view/26329>
  32. Amran Y, Nasir NM, Dini Dachlia FY, Utomo B, Ariawan I, Damayanti R. Perceptions of Contraception and Patterns of Switching Contraceptive Methods among Family-Planning Acceptors in West Nusa Tenggara, Indonesia. *J Prev Med Public Heal* [Internet]. 2019;52(4):258–264. Available from: <https://doi.org/10.3961/jpmp.18.198>
  33. Karra M, Pearson E, Pradhan E, De Silva R, Samarasekera A, Canning D, Shah I, Weerasekera D, Senanayake H. The Effect of A Postpartum IUD Intervention on Counseling and Choice: Evidence from A Cluster-Randomized Stepped-Wedge Trial in Sri Lanka. *Trials*. 2019;20:1–15. Available from: <https://doi.org/10.1186/s13063-019-3473-6>
  34. Japaridze T, Kristesashvili J, Imnadze P. The Influence of Sources of Information on Contraception Use in Georgia. *Georgian Med News*. Georgian Med News. 2015;Nov (248):16–20. Available from: <https://pubmed.ncbi.nlm.nih.gov/26656545/>