DETERMINANTS OF THE USE OF TRADITIONAL CONTRACEPTIVE METHODS IN INDONESIA (2017 IDHS DATA ANALYSIS)

Henny Fatmawati[1*], Evi Martha[2]

[1]Magister Student of Reproductive Health Study Group, Faculty of Public Health Universitas Indonesia, Kampus FKM UI Depok, West Java, Indonesia
[2]Department of Health Education and Behavioral Sciences, Faculty of Public Health Universitas Indonesia, Kampus FKM UI Depok, West Java, Indonesia

ABSTRACT

The 2017 IDHS shows that modern family planning tools/methods tend to decrease while traditional family planning methods increase. This study aimed to determine the factors associated with using conventional contraceptives in Indonesia. This study uses secondary data from the 2017 IDHS. The sample size is 11,542 women of childbearing age 15-49 years. The dependent variable in this study was the use of traditional contraceptives. In contrast, the independent variables consisted of age, education level, mother's occupation, economic status, area of residence, number of children, desire to have children, the decision to use contraception, knowledge of family planning tools/methods, knowledge of fertile periods, visits by field officers, sources of information from the mass media, and ownership of health insurance. The analysis results show that women of childbearing age who are <20 years old or >35 years old, have a higher education level, and live in urban areas tend to use traditional contraceptive methods. Furthermore, women of childbearing age with good knowledge about family planning methods and their fertile period also tend to use traditional contraceptive methods. In addition, the husband's decision to use contraception and not to accept visits by field workers also influences women of childbearing age to use traditional contraceptive methods. The sources of information from the mass media and the use of conventional contraceptives were not different. BKKBN, through Family Planning Field Officers (PLKB), needs to socialize the family planning program so that it can motivate people to switch to modern contraceptive methods, especially long-term contraceptive methods.

Keywords: family planning, contraception, traditional contraception, Indonesia

ABSTRAK

Hasil SDKI 2017 menunjukkan bahwa penggunaan alat/cara KB modern cenderung menurun, sedangkan penggunaan KB tradisional meningkat. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang berhubungan dengan penggunaan metode kontrasepsi tradisional di Indonesia. Penelitian ini menggunakan data sekunder dari SDKI 2017. Besar sampel adalah 11.542 wanita usia subur dengan usia 15-49 tahun. Variabel dependen dalam penelitian ini adalah penggunaan metode kontrasepsi tradisional, sedangkan variabel independen terdiri dari usia, tingkat pendidikan, pekerjaan ibu, status ekonomi, daerah tempat tinggal, jumlah anak, keinginan memiliki anak, keputusan menggunakan kontrasepsi, pengetahuan tentang alat/cara KB, pengetahuan masa subur, kunjungan petugas lapangan, sumber informasi media massa, dan kepemilikan asuransi kesehatan. Hasil analisis menunjukkan bahwa wanita usia subur yang berusia <20 tahun atau >35, memiliki tingkat pendidikan tinggi, dan tinggal di perkotaan cenderung menggunakan metode kontrasepsi tradisional. Wanita usia subur yang memiliki pengetahuan baik tentang metode kontrasepsi dan masa subur juga cenderung menggunakan metode kontrasepsi tradisional. Selain itu, keputusan suami untuk mengunakan kontrasepsi dan tidak mendapat kunjungan petugas lapangan juga mempengaruhi wanita usia subur untuk menggunakan metode kontrasepsi tradisional. Sementara tidak terdapat perbedaan variabel sumber informasi media massa dengan penggunaan metode kontrasepsi tradisional. BKKBN melalui petugas lapangan KB (PLKB) perlu mensosialisasikan kembali program KB agar masyarakat diharapkan beralih ke kontrasepsi modern, khususnya Metode Kontrasepsi Jangka Panjang (MKJP).

Kata kunci: keluarga berencana, kontrasepsi, kontrasepsi tradisional, Indonesia

---

* Correspondence Address: Henny Fatmawati , Magister Student of Reproductive Health Study Group, Faculty of Public Health Universitas Indonesia, Kampus FKM UI Depok, West Java, Indonesia, E-mail: fatmawati.henny91@gmail.com

Introduction

Indonesia is the fourth most populous country in the world, after China, India, and the United States.[1] Indonesia's population has increased by around 32.57 million people from 2010 (237.64 million people) to 2020 (270.20 million people).[2] One reason for this increase in population is the high birth rate (fertility). However, Indonesia's total fertility rate (TFR) was at 2.4 in 2017[3], still far from the 2020-2024 National Medium-Term Development Plan target of 2.1.[4]

To control the rate of population growth, the government has made various efforts, one of which is family planning. Family planning aims to regulate the birth spacing of children, the ideal age to give birth, and to control pregnancy through activities to promotion, protection, and assistance by reproductive rights to create a quality family. Based on the 2017 Indonesian Demographic Health Survey (IDHS), the use of family planning methods/methods in women of childbearing age 15-49 years has increased from 62% in 2012 to 64% in 2017. However, the use of modern contraceptive methods has decreased from 58 % (2012) to 57% (2017), while traditional family planning increased from 4% (2012) to 6% (2017).[3]

The method of protection based on the period of protection provided is the Long Term Contraceptive Method (MKJP) and Non-Long Term Contraceptive Method (non-MKJP). In addition, other commonly used categories are hormonal and non-hormonal contraception, as well as modern and traditional contraception.[5] Based on Minister of Health Regulation Number 21 of 2021, modern types of contraception include IUDs, implants, tubectomy, vasectomy, injectable birth control, birth control pills, condoms, and the Lactation Amenorrhea method. Meanwhile, traditional types of protection include periodic abstinence and withdrawal (coitus interruptus).[5] The types of fertile period awareness methods are calendar-based and symptom-based (cervical mucus and basal body temperature).[6]

Both modern and traditional contraceptive methods contribute to the overall contraceptive prevalence rate (CPR). However, modern contraceptive methods are more effective in preventing pregnancy.[7] Research with analysis of data from 43 countries shows that failure rates at 12 months after use are reported to be lowest for users of MKJP, such as implants (0.6 failures per 100 episodes of care), IUDs (1.4), and injections (1.7).[8] The highest failure rate is for users of traditional methods. For example, the interruption method has a failure rate of 13.4 per 100 episodes of use[8], or 22% of every 100 women who experience an unwanted pregnancy in the first year of using the contraceptive method.[9] Meanwhile, the failure rate of the periodic abstinence method was 13.9 per 100 episodes of use, or 24% of every 100 women who experienced an unwanted pregnancy in the first year of using the contraceptive method.[9] With a high failure rate, using traditional contraceptive methods not supported by excellent and consistent knowledge can

result in unwanted pregnancies, which can end in unsafe abortions. Conversely, effective contraceptive methods can prevent as many as one in three maternal deaths globally by delaying pregnancies, spacing births, avoiding unwanted pregnancies, and unsafe abortions.[10] Therefore, the strategy for implementing family planning programs aims to increase the use of modern contraception, especially long-term contraceptive methods with low failure rates, such as implants, IUDs, vasectomy, and tubectomy.[11]

The theory of family planning decision-making put forward in Ushma D Upadhyay's research states that direct and indirect factors influence a person's decision to choose and use a particular family planning method. The direct factors include socio-demographics, life cycle, relationship with partners, perceptions of family planning, client-provider communication, and program management. Indirect factors include government policies, information, access, community, and households.[12]

Research mainly discusses the factors related to the choice of general or specific contraceptive methods in modern contraceptive methods. However, with the increasing use of traditional contraceptive methods, it is necessary to study the factors that influence them so that family planning policies and programs can be more effective, including encouraging the use of traditional contraceptives to switch to more effective modern contraceptives. Therefore, this study aims to determine traditional contraceptive methods in Indonesia using secondary data from the 2017 IDHS.

Method

This type of research is quantitative with a cross-sectional study design, using secondary data from the 2017 IDHS. This survey was conducted in 34 provinces in Indonesia and spread across 1,970 census blocks covering urban and rural areas. The 2017 Indonesian Health Demographic Survey collected data from 24 July to 30 September 2017. The sample design used in the 2017 IDHS was stratified two-stage sampling. The first stage is to select several census blocks using systematic probability proportional to size (PPS) with the number of households listed due to the 2010 Population Census. The next stage is to select 25 ordinary families in each census block systematically set from the results of household updates in each census block. The population in this study were women of childbearing age 15-49 years who live in Indonesia. The sample is a respondent recorded in the 2017 IDHS, which classifies inclusion and exclusion criteria. The inclusion criteria were women of childbearing age 15-49 years, currently married, and using traditional and modern contraception. In comparison, the exclusion criteria were women who did not use contraception and incomplete data (missing data). The number of samples used in this study amounted to 11,542 respondents.

The dependent variable in this study is the use of traditional contraceptive methods. Traditional contraceptive methods in the 2017 IDHS are periodic abstinence, interruption of sexual intercourse, and other traditional methods. The independent variables in this study are modifications of the Family Planning Decision Making theory adapted to the 2017 IDHS questionnaire. The independent variables consist of age, level of education, job, economic status, residential areas, number of children, desire to have children, the decision to use contraception, knowledge of family planning methods/methods, knowledge of the fertile period, field officer visits, sources of mass media information, and health insurance ownership.

Researchers categorize the variables in this study. The variable categories of using traditional contraceptive methods are yes and no. The categories of age variables are 20-35 years old and <20 or >35 years old, occupations, namely working and not working, and residential areas, namely urban and rural areas. The categories of education level variables are high (high school, academy, and diploma), medium (junior high school), and low (non-school and elementary school). The categories of economic status variables are the minimum upper middle class (upper and upper middle class), middle class, and maximum lower middle class (lower middle class and lower middle class). The variable categories of the number of children are >2 children and ≤2 children, knowledge of family planning tools/methods, namely well and not enough, and knowledge of the fertile period, namely knowing and not knowing. The variable categories of the desire to have children are do not want, have not decided yet, and want. Finally, the categories of decision variables to use contraception are joint decisions, own decisions, and husband decisions. The variable categories of visits by field officers are visited and not visited, and the variable sources of information in the mass media are exposed and not exposed. Finally, the variable category of health insurance ownership is having and not having.

This study analyzed the data descriptively and analytically using SPSS 25.0 software. Descriptive analysis to describe the specifications of women of childbearing age 15-49 years who use traditional contraceptive methods. Furthermore, the data obtained were then analyzed bivariate using the chi-square test to determine the relationship or influence of the independent variables on the dependent variable. Then a multivariate analysis was performed using logistic regression to determine the variable that most significantly influences the choice of traditional contraceptive methods. This research has passed an ethical review from the Research and Community Engagement Ethical Committee, Faculty of Public Health, Universitas Indonesia, with an ethical qualification letter Number: Ket-644/UN2.F10.D11/PPM.00.02/2022.

Results

The total number of respondents in this study was 11,542 women of childbearing age 15-49 years, most of whom used modern contraception (89.7%) compared to traditional contraception

(10.3%). Of the 1,188 respondents who used traditional contraceptive methods, 66.6% used the withdrawal method, 29.6% used the periodic abstinence method, and the remaining 3.8% used other traditional contraceptive methods. Most respondents were aged 20-35 (51.6%), with the highest level of education being junior high school (54.3%). Most of the respondents work (59.2%), with middle to upper economic status (43.1%), and live in rural areas (50.6%). Most of the respondents had ≤2 children (67.1%), whereas most of the respondents stated that they did not want to have any more children (60.6%) and the decision to use contraception was a joint decision (59.6%). Related to knowledge, more respondents had less knowledge about family planning methods (58.7%), and most did not know about the fertile period (76.2%). Most of the respondents were exposed to family planning messages through the mass media (75.5%) but did not receive visits from field workers (79.3%). Most of the respondents have health insurance (61.5%). The characteristics of the respondents are shown in Table 1.

Based on the results of bivariate analysis (Table 2), it was found that the factors associated with the use of traditional contraceptive methods in women of childbearing age 15-49 years (p-value ≤ 0.05) were age, level of education, economic status, occupation, residential area, the decision to use contraception, knowledge of family planning methods/methods, knowledge of the fertile period, field officers visits, sources of information from the mass media, and health insurance ownership. Only two variables are not related to traditional contraceptive methods: the number of children and the desire to have children.

From the results of the bivariate analysis, it can be seen that the most significant proportion of respondents using traditional contraceptive methods were aged <20 or >35 years (11.9%), higher education level (20.3%), employed (11.1%), economic status upper middle class (14.0%), and live in urban areas (13.26%). In addition, the most significant proportion of respondents used traditional contraceptive methods, namely the decision to use contraception by their husbands (18.2%), not visited by field officers (11%), exposed to information from the mass media (11.3%), and had insurance health (11.5%). Meanwhile, based on the respondents' knowledge, the most significant proportion of respondents who used traditional contraceptive methods were those who had good knowledge of family planning tools/methods (15.6%) and knew about the fertile period (14.9%).

Table 1. Characteristics of Women of Childbearing Age 15-49 Years Who Used Contraception in Indonesia in 2017

Variable	Amount	
	n	**%**
Type of Contraception		
Modern	10,354	89.7
Traditional	1,188	10.3
• Withdrawal	791	66.6
• Periodic abstinence	352	29.6
• Other traditional	45	3.8
Age		
20-35 years old	5,953	51.6
<20 or >35 years old	5,589	48.4
Level of Education		
High (High School, Academy, Diploma)	1,514	13.1
Intermediate (Junior High)	6,270	54.3
Low (no school, Elementary School)	3,758	32.6
Occupation		
Working	6,827	59.2
Not working	4,715	40.8
Economic Status		
Minimum upper secondary (upper middle, top)	4,977	43.1
Intermediate	2,450	21.2
Maximum lower middle (lower middle, lowest)	4,114	35.7
Residential Area		
Urban	5,697	49.4
Rural	5,845	50.6
Number of Children		
>2 children	3,792	32.9
≤2 children	7,750	67.1
Desire to have Children		
Don't want	6,997	60.6
Have not decided yet	377	3.3
Want	4,168	36.1
The Decision to Use Contraception		
Joint decision	6,877	59.6
Own decision	3,829	33.2
Husband's decision	836	7.2
Knowledge of Family Planning Tools/Methods		
Well	4,765	41.3
Not enough	6,776	58.7
Knowledge of the Fertile Period		
Not knowing	8,799	76.2
Knowing	2,743	23.8
Field Officer Visits		
Visited	2,386	20.7
Not visited	9,156	79.3
Source of Mass Media Information		
Exposed	8,710	75.5
Not exposed	2,832	24.5
Health Insurance Ownership		
Having	7,099	61.5
Not having	4,443	38.5

Table 2. Results of Determinant Bivariate Analysis on the Use of Traditional Contraceptive Methods in Indonesia

Variable	Users of Traditional Contraceptive Methods		Total	p-value	PR (95% CI)
	Yes	No			
Age					
20-35 years old	525 (8.8)	5,428 (91.2)	5,953 (100)		
<20 or >35 years old	663 (11.9)	4,926 (88.1)	5,589 (100)	0.0001	1.344 (1.176 – 1.536)
Level of Education					
Low (no school, Elementary School)	213 (5.7)	3,545 (94.3)	3,758 (100)		
Intermediate (Junior High)	667 (10.6)	5,603 (89.4)	6,270 (100)	0.0001	1.875 (1.571 – 2.237)
High (High School, Academy, Diploma)	308 (20.3)	1,206 (79.7)	1,514 (100)	0.0001	3.582 (2.929 – 4.381)
Occupation					
Not working	431 (9.1)	4,284 (90.9)	4,715 (100)		
Working	756 (11.1)	6,071 (88.9)	6,827 (100)	0.005	1.211 (1.058 – 1.386)
Economic Status					
Maximum lower middle (lower middle, lowest)	292 (7.1)	3,822 (92.9)	4,114 (100)		
Intermediate	198 (8.1)	2,253 (91.9)	2,451 (100)	0.214	1.135 (0.929 – 1.386)
Minimum upper secondary (upper middle, top)	698 (14.0)	4,279 (86.0)	4,977 (100)	0.0001	1.973 (1.679 – 2.319)
Residential Area					
Rural	437 (7.5)	5,408 (92.5)	5,845 (100)		
Urban	751 (13.2)	4,946 (86.8)	5,697 (100)	0.0001	1.763 (1.511 – 2.057)
Number of Children					
≤2 kids	794 (10.2)	6,956 (89.8)	7,750 (100)		
>2 kids	394 (10.4)	3,398 (89.6)	3,792 (100)	0.818	1.015 (0.894 – 1.153)
Desire to have Children					
Have not decided yet	30 (7.9)	347 (92.1)	377 (100)		
Don't want	725 (10.4)	6,271 (89.6)	6,996 (100)	0.181	1.316 (0.880 – 1.966)
Want	433 (10.4)	3,736 (89.6)	4,169 (100)	0.191	1.316 (0.872 – 1.988)
The Decision to Use Contraception					
Own decision	201 (5.2)	3,628 (94.8)	3,829 (100)		
Joint decision	835 (12.1)	6,042 (87.9)	6,877 (100)	0.0001	2.312 (1.915 – 2.791)
Husband decision	152 (18.2)	684 (81.8)	836 (100)	0.0001	3.472 (2.657 – 4.536)
Knowledge of Family Planning Tools/Methods					
Not enough	446 (6.6)	6,331 (93.4)	6,777 (100)		
Well	742 (15.6)	4,023 (84.4)	4,765 (100)	0.0001	2.366 (2.070 – 2.704)
Knowledge of the Fertile Period					
Not knowing	780 (8.9)	8,019 (91.1)	8,799 (100)		
Knowing	408 (14.9)	2,335 (85.1)	2,743 (100)	0.0001	1.676 (1.473 – 1.906)
Field Officer Visits					
Visited	178 (7.4)	2,209 (92.6)	2,387 (100)		
Not visited	1010 (11.0)	8,145 (89.0)	9,155 (100)	0.0001	1.483 (1.243 – 1.769)
Source of Mass Media Information					
Not exposed	204 (7.2)	2,628 (92.8)	2,832 (100)		
Exposed	984 (11.3)	7,726 (88.7)	8,710 (100)	0.0001	1.570 (1.314 – 1.877)
Health Insurance Ownership					
Not having	369 (8.3)	4,074 (91.7)	4,443 (100)		
Having	819 (11.5)	6,280 (88.5)	7,099 (100)	0.0001	1.392 (1.202 – 1.610)

From the results of the bivariate analysis (Table 2), 11 variables (p-value ≤ 0.25) were included in the multivariate modeling, namely age, level of education, occupation, economic status, residential area, the decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, field officers visits, sources of mass media information, and health insurance ownership. Multivariate modeling is done by conducting a confounding test. The confounding variables will be excluded one by one, starting from the most significant p-value (p-

value > 0.05), taking into account changes in the PR value. If the results of changes in PR <10%, the variable will be removed from the model. However, if the results of PR changes are > 10%, the excluded variables will be re-entered into the model and considered confounding variables.

From the results of the confounding test, the variables of occupation, economic status, and health insurance ownership were excluded from the model. Meanwhile, the variable source of mass media information with a p-value of 0.057 (p-value > 0.05) was again included in the model because there was a PR change value of > 10% for the low education level variable (10.07% PR change). Therefore, the source of mass media information variable becomes a confounding variable. The final results of the multivariate model can be seen in Table 3.

Table 3. Results of Multivariate Analysis of Determinants of Using Traditional Contraceptive Methods in Indonesia 2017

Variable	p-value	PR	95% CI
Age			
20-35 years old			
<20 or >35 years old	0.0001	1.337	1.176 – 1.520
Level of Education			
Low (no school, Elementary School)			
Intermediate (Junior High)	0.0001	1.511	1.260 – 1.812
High (High School, Academy, Diploma)	0.0001	2.099	1.680 – 2.623
Residential Area			
Rural			
Urban	0.0001	1.325	1.138 – 1.542
The Decision to Use Contraception			
Own decision			
Joint decision	0.0001	2.047	1.704 – 2.459
Husband decision	0.0001	3.072	2.362 – 3.994
Knowledge of Family Planning Tools/Methods			
Not enough			
Well	0.0001	1.1923	0.994 – 1.430
Knowledge of the Fertile Period			
Not knowing			
Knowing	0.004	1.211	1.064 – 1.380
Field Officer Visits			
Visited			
Not visited	0.0001	1.462	1.229 – 1.738
Source of Mass Media Information			
Not exposed			
Exposed	0.057	1.192	0.994 – 1.430

Table 3 above shows differences in risk between age, level of education, residential area, the decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, and field officers' visits using traditional contraceptive methods (p-value <0.05). At the same time, there is no difference in the variable sources of information in the field of mass media with the use of traditional contraceptive methods. The PR value of each independent variable is compared between the two or more categories of these variables—the more significant the PR value, the greater the risk to the independent variable. Based on the highest PR value, the

most dominant independent variable is the husband's decision to use contraception (PR = 3.072). The husband's decision has a 3.072 times higher tendency to use traditional contraceptive methods compared to joint decisions after controlling for factors such as age, level of education, residential area, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information.

Discussion

Respondents aged <20 years or >35 years have a 1.337 times greater tendency to use traditional contraceptive methods compared to respondents aged 20-35 years after controlling for factors such as level of education, residential area, the decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. These results align with the research of Zgliczynska et al. in women aged 18-35 years in Poland, where age influences the choice of contraception.[13] Another study conducted in East Java found results where women of childbearing age with marital status who used traditional contraceptive methods were grouped at the age of over 35 years.[14] Meanwhile, research conducted in Talaud District stated that none of the respondents aged less than 20 used long-term contraceptive methods.[15] According to the pregnancy planning phase, women over 35 years, are in the stage of no longer getting pregnant or terminating pregnancies,[16] while women under 20 use contraception to delay pregnancy until the safe age limit is ≥20 years.[17] Being too young (<20 years) or too old (>35 years) is at greater risk for pregnancy complications. Complications generally include stillbirths, low birth weight babies (LBW), premature birth, preeclampsia, and maternal death.[18,19] Therefore, the required method of contraception is safe and effective in preventing pregnancy.

On the level of education variable, respondents with an intermediate education level had a 1.511 times greater tendency to use traditional contraceptive methods compared to respondents with a low education level education after controlling for factors such as age, residential area, the decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. Respondents with higher education had a 2,099 times higher tendency to use traditional contraceptive methods compared to respondents with lower education after controlling for factors such as age, residential area, the decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. These results are consistent with Urip Tri Wijayanti's research, where women with higher education tend to use traditional contraception 3.42 times compared to women with low education.[20] Research conducted using the method of systematic reflection found four studies that stated that women with a high school level of education and above were significantly associated with the likelihood of using

traditional contraceptive methods.[21] Women who are highly educated are more likely to use periodic abstinence than modern contraceptive methods because of the lower side effects of using periodic abstinence methods compared to modern contraceptive methods and lack of knowledge about family planning.[22,23] This result is contrary to the expectations of government programs, where highly educated women are expected to use modern contraceptives.[16] The higher the education, the more knowledge about the benefits and risks of using contraceptives so that they will choose modern methods that are safe, practical, long-term, and highly effective in preventing pregnancy.[20]

Respondents who live in urban areas are 1,325 times more likely to use traditional contraceptive methods compared to those who live in rural areas after controlling for age, level of education, decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. This result is in line with the results of several studies, which state that women who live in urban areas tend to use traditional contraceptive methods.[14,16,24] Women living in urban areas have a 2.265 times greater tendency to use traditional contraceptive methods than women living in rural areas.[16] This is because rural communities have more time to access information about family planning, so more knowledge about modern contraception tools/methods is obtained.[14] Rationally, women living in urban areas find it easier to access information about contraception, health facilities, modern family planning methods, and others than women living in rural areas.[14,16,25] Women who live in urban areas are more inclined to use traditional contraceptive methods due to fear of side effects from using modern family planning.[26] Easier access to information in urban areas will increase understanding and provide consideration for deciding which contraceptive method to use. Because of the fear of side effects of modern family planning, women living in urban areas choose to use traditional contraceptive methods by paying attention to methods according to their needs.[26]

Respondents who decided to use traditional contraceptive methods together with their husbands obtained a PR value of 2.047 which means that respondents with a joint decision tend to use traditional contraceptive methods 2.047 times higher than respondents with their own decision after controlling for factors such as age, level of education, residential area, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. Respondents with a husband's decision obtained a PR value of 3.072, which means that respondents with a husband's decision have a 3.072 times higher tendency to use traditional types of family planning contraception compared to respondents with a joint decision controlled by factors such as age, level of education, residential area, knowledge of family planning tools/methods, knowledge of the fertile period, field officer visits, and sources of mass media information. Research conducted by Indrayathi found that decision-making by husbands is four times more significant to use traditional tools/methods than only women as decision-makers. In

contrast, when decision-makers are made jointly (husband and wife), it tends to 2 times more to choose traditional contraceptives.[27] The patriarchal culture in Indonesia affects the division of roles in society, where the part of woman is a mother, and the wife is responsible for running the household. At the same time, the husband is more involved in earning a living. This division of roles also influences decision-making in the home. As the head of the family, the husband is considered entitled to make decisions, including the use of contraception, thus making the husband a strong enough factor influencing a wife to make decisions such as using contraception.[28] Choosing a method can be determined by the number and sex of children.[23]

As for the variable knowledge of family planning tools/methods, respondents with good knowledge tend 1.1923 times higher to use traditional contraceptive methods compared to respondents with less knowledge after controlling for factors of age, level of education, residential area, decision to use contraception, knowledge of the fertile period, field officer visits, and sources of mass media information. This result contradicts the results of other studies, which prove that the use of modern contraception is higher in couples of childbearing age who know eight types of modern contraceptive methods (5.5%) when compared to couples of childbearing age who do not understand.[29] The more contraceptive methods known to couples of childbearing age, the higher the tendency to use contraception.[30] Good knowledge about family planning programs, including freedom of choice, the effectiveness of contraception methods/methods, safety, and places for family planning services, will influence couples of childbearing age in utilizing family planning services and choosing the contraceptive method/equipment used.[30]

Respondents who know their fertile period have a 1.211 times higher tendency to use traditional birth control methods compared to respondents who do not know their fertile period after controlling for factors such as age, level of education, residential area, decision to use contraception, knowledge of family planning tools/methods, field officer visits, and sources of mass media information. These results align with research conducted in East Java, where women who understand the fertile period are two times more likely to use traditional contraceptive methods than those who do not understand the fertile period.[14] Other studies have found that knowledge about family planning, including about the fertile period, is related to choosing to use contraception or not to use contraception.[31] Respondents who correctly understand the fertile period dare to use traditional contraceptive methods because they believe these methods are effective for choosing.[14]

From the statistical test, it was found that there was a difference in risk between field staff visits and the use of traditional contraceptive methods. In addition, a PR value of 1.462 means that respondents whom field officers do not visit have a 1.462 times higher tendency to use traditional contraceptive methods compared to respondents whom field officers call after controlling for factors of age, level of education, residential area, decision to use contraception, knowledge of

family planning tools/methods, knowledge of the fertile period, and sources of mass media information. Mazzei et al.'s research stated that women of childbearing age who received visits from field officers had better knowledge of contraception than those who did not receive visits, which would affect the choice of contraceptive method to be a long-term contraceptive method.[32] Field officers or family planning cadres who have received family planning counseling training are expected to become extensions of health services in health facilities. In developing countries, cadres are effective as education providers for various health programs in the community, including family planning programs so that they can increase public knowledge about contraceptive methods.[33]

In this study, the mass media information source variable is confounding. From the results of the multivariate test, it was found that there was no difference in the use of traditional contraceptive methods based on mass media information sources after controlling for factors of age, level of education, residential area, decision to use contraception, knowledge of family planning tools/methods, knowledge of the fertile period, and field officer visits. This result is different from the research result of Zgliczynska et al., which states that the source of information is one of the factors related to the use of contraception.[13] Another study also revealed that public service advertisements about family planning on television turned out to be effective in influencing people to use family planning and increasing the number of family planning acceptors because advertisements were delivered repeatedly it stimulated people to keep thinking until they finally decided to become family planning acceptors to support family planning. government programs.[34] Information media carry messages that suggest directing one's opinion, whereas strong affective messages will provide a basis for judging something so that a certain attitude direction will be formed.[35]

Conclusion

Based on the results that have been presented, it can be concluded that of the current women of childbearing age 15-49 years who use family planning methods in Indonesia, 10.3% of them use traditional contraception. The factors that have the most significant influence on the use of traditional contraceptive methods include age, level of education, residential area, the decision to use contraception, knowledge of contraceptive tools/methods, knowledge of the fertile period, and field officer visits using traditional contraceptive methods. Therefore, BKKBN, through family planning field officers (PLKB), needs to re-socialize the community regarding family planning programs (choice of contraceptive methods, side effects, ways to deal with side effects, and others) to increase public knowledge so that they can reconsider the choice of contraception used and are expected to switch to contraception modern, especially long-term contraceptive methods. In addition, the role of PLKB is necessary for socialization related to knowledge of the fertile period

so that people who still choose traditional methods are still effective in regulating birth spacing. Furthermore, conveying information on the selection of contraceptive methods can also involve religious leaders and community leaders to serve as an example for couples of childbearing age who are highly educated and live in urban areas to use modern methods of contraception rather than traditional ones. In addition, socialization regarding the family planning program can be carried out through various social media that are now widely accessed by the public, for example, Instagram, Facebook, and others. Finally, counseling on the selection of family planning methods by health workers should be done with women and their partners/husbands so that decisions can be made with their partners about using family planning better.

Acknowledgement

Funding

Conflict of Interest

The authors declare that they have no competing interests.

Reference

1. United Nations Department of Economic and Social Affairs. World Population Prospects 2022 Summary of Results. New York; 2022.

2. Badan Pusat Statistik. Statistik Indonesia 2021. Jakarta; 2021.

3. BKKBN, Badan Pusat Statistik, Kementerian Kesehatan. Survei Demografi Dan Kesehatan Indonesia 2017. Jakarta; 2018.

4. Presiden RI. Peraturan Presiden RI Nomor 18 Tahun 2020 Tentang Rencana Pembangunan Jangka Menengah Nasional Tahun 2020-2024. 2020.

5. Kementerian Kesehatan RI. Peraturan Menteri Kesehatan RI Nomor 21 Tahun 2021 Tentang Penyelenggaraan Pelayanan Kesehatan Masa Sebelum Hamil, Masa Hamil, Persalinan, Dan Masa Sesudah Melahirkan, Pelayanan Kontrasepsi, Dan Pelayanan Kesehatan Seksual. 2021.

6. Duane M, Stanford JB, Porucznik CA, et al. Fertility Awareness-Based Methods for Women's Health and Family Planning. Front Med (Lausanne) 2022;9:1–13; doi: 10.3389/fmed.2022.858977.

7. Bertrand JT, Ross J, Glover AL. Declining Yet Persistent Use of Traditional Contraceptive Methods in Low- and Middle-Income Countries. J Biosoc Sci 2021;54(5):742–759; doi: 10.1017/S0021932021000341.

8. Polis CB, Bradley SEK, Bankole A, et al. Highlights Contraceptive Failure Rates in the Developing World: An Analysis of Demographic and Health Survey Data in 43 Countries Contraceptive Failure Rates in the Developing World: An Analysis of Demographic and Health Survey Data in 43 Countries. Guttmacher Institute 2016;1–76; doi: 10.1016/j.contraception.2016.03.011.

9. World Health Organization, John Hopkins, United States Agency for International Development. Family Planning A Global Handbook For Providers 2018 Edition. 2018.

10. Birgisson NE, Zhao Q, Secura GM, et al. Preventing Unintended Pregnancy: The Contraceptive CHOICE Project in Review. J Womens Health 2015;24(5):349–353; doi: 10.1089/jwh.2015.5191.

11. Kaafi F, Nurwahyuni A. Determinan Pemilihan Metode Kontrasepsi Jangka Panjang (MKJP) pada Wanita Usia Subur di Provinsi Jawa Tengah: Analisis Data Susenas 2018. AN-NUR : Jurnal Kajian dan Pengembangan Kesehatan Masyarakat 2021;1(2):161–172; doi: 10.24853/an-nur,%201,%202,%20161-172.

12. Rahmi NA, Akbar IZ, Ilmi B, et al. Meta-Analysis: The Influence of Knowledge, Education, and Husband's Support on The Selection of Long Acting Contraception Methods. Jurnal Berkala Kesehatan 2021;7(2):124–133; doi: 10.20527/jbk.v7i2.10812.

13. Zgliczynska M, Szymusik I, Sierocinska A, et al. Contraceptive Behaviors in Polish Women Aged 18–35 a Cross-sectional Study. Int J Environ Res Public Health 2019;16(15):1–13; doi: 10.3390/ijerph16152723.

14. Ibad M, Lutfiya I, Imron A, et al. Determinan Penggunaan Alat Kontrasepsi Tradisional di Jawa Timur. Jurnal Human Care 2021;6(1):130–138; doi: 10.32883/hcj.v6i1.1107.

15. Lontaan A, Kusmiyati, Dompas R. Faktor – Faktor Yang Berhubungan Dengan Pemilihan Kontrasepsi Pasangan Usia Subur Di Puskesmas Damau Kabupaten Talaud. Jurnal Ilmiah Bidan 2014;2(1):27–32; doi: 10.25311/jkk.Vol3.Iss1.99.

16. Wijayanti UT. Faktor-Faktor yang Berhubungan dengan Penggunaan Metode Kontrasepsi Tradisional. Jurnal Promosi Kesehatan Indonesia 2021;16(1):14–22; doi: 10.14710/jpki.16.1.14-22.

17. Ismiyati, Gumilar Nugraha D. Faktor-Faktor Penggunaan Kontrasepsi di Wilayah Pedesaan Provinsi Banten (Analisis Data SDKI 2017). Medikes (Media Informasi Kesehatan) 2020;7(1):231–236; doi: 10.36743/medikes.v7i1.238.

18. Heazell AEP, Newman L, Lean SC, et al. Pregnancy Outcome in Mothers Over the Age of 35. Curr Opin Obstet Gynecol 2018;30(6):337–343; doi: 10.1097/GCO.0000000000000494.

19. Abdurradjak K, Mamengko LM, Wantania JJE, et al. Karakteristik Kehamilan dan Persalinan Pada Usia <20 Tahun di RSUP Prof. Dr. R. D. Kandou Manado Periode 1 Januari 2013-31 Desember 2014. Jurnal e-Clinic (eCl) 2016;4(1):1–8; doi: 10.35790/ecl.4.1.2016.12225.

20. Wijayanti UT. Penggunaan Kontrasepsi Tradisional di Wilayah Perkotaan Provinsi Sulawesi Utara. Seminar Nasional LPPM UMMAT 2022;1:40–47. ISSN: 2964-6871

21. Bationo N, Ngangue PA, Soubeiga D, et al. Preferences and Motivations of Women Who Use Traditional Contraceptive Methods to Avoid Pregnancy in Sub-Saharan Africa: A Systematic Review. Advances in Sexual Medicine 2022;12(02):47–64; doi: 10.4236/asm.2022.122005.

22. Chabibah IFA, Satriyandari Y. Determinants of Traditional Contraceptive use among Women. Women, Midwives and Midwifery 2022;2(1):1–19; doi: 10.36749/wmm.2.1.1-19.2022.

23. Almalik M, Mosleh S, Almasarweh I. Are Users of Modern and Traditional Contraceptive Methods in Jordan Different? Eastern Mediterranean Health Journal 2018;24(4):377–384; doi: 10.26719/2018.24.4.377.

24. Gebreselassie T, Bietsch K, Staveteig S, et al. DHS Analytical Studies 63 Trends, Determinants, and Dynamics of Traditional Contraceptive Method Use. Rockville, Maryland, USA; 2017.

25. Lasong J, Zhang Y, Gebremedhin SA, et al. Determinants of Modern Contraceptive Use Among Married Women of Reproductive Age: A Cross-sectional Study in Rural Zambia. BMJ Open 2020;10(3):1–10; doi: 10.1136/bmjopen-2019-030980.

26. Erfani A. Factors Associated with the Use of Withdrawal in Iran: Do Fertility Intentions Matter? Article in Journal of Comparative Family Studies 2012;43(2):301–312; doi: 10.2307/41604513.

27. Indrayathi PA, Marfianti I, Damadita PD, et al. Determinan Pemilihan Alat Kontrasepsi Tradisional di Wilayah Perkotaan dan Perdesaan Provinsi Bali. Arc Com Health 2021;8(2):189–203; doi: 10.24843/ACH.2021.v08.i02.p01.

28. Tristanti I, Nasriyah. Hubungan Dukungan Suami Dalam Pemilihan Metode Kontrasepsi Jangka Panjang (MKJP). The 4 th Univesity Research Coloquium 2016 2016;33–42. ISSN: 2407-9189

29. Firdawati F, Pujiyanto, Ekoriano M. Faktor yang Mempengaruhi Penggunaan Kontrasepsi Modern di Wilayah Perkotaan: Analisis SKAP 2019. Jurnal Ilmiah Indonesia 2022;7(6):7407–7421; doi: 10.36418/syntax-literate.v7i6.7413.

30. Indra Susanti A, Indraswari N, Nilam Sari A, et al. An Analysis of Sociodemography, Knowledge, Source of Information, and Health Insurance Ownership on the Behaviour of

Women of Childbearing Age in Contraception Use in West Java. Malaysian Journal of Public Health Medicine 2021;21(3):183–191; doi: 10.37268/mjphm/vol.21/no.3/art.964.

31. Fitriyah N. Pilihan Fertilitas Suami dan Unmet Need KB Pada Pasangan Usia Subur (PUS) di Indonesia (Analisis Data SDKI 2007). Jurnal Kesehatan Masyarakat Andalas 2017;11(1):49–54; doi: 10.24893/jkma.v11i1.264.

32. Mazzei A, Ingabire R, Mukamuyango J, et al. Community Health Worker Promotions Increase Uptake of Long-acting Reversible Contraception in Rwanda. Reprod Health 2019;16(1):1–11; doi: 10.1186/s12978-019-0739-0.

33. Scott VK, Gottschalk LB, Wright KQ, et al. Community Health Workers' Provision of Family Planning Services in Low- and Middle-Income Countries: A Systematic Review of Effectiveness. Stud Fam Plann 2015;46(3):241–261; doi: 10.1111/j.1728-4465.2015.00028.x.

34. Ekawati R, Ernungtyas NF. Efek Iklan Televisi Program Keluarga Berencana. Jurnal Komunikasi 2016;8(1):12–24; doi: 10.24912/jk.v8i1.45.

35. Brunie A, Tolley EE, Ngabo F, et al. Getting to 70%: Barriers to Modern Contraceptive Use for Women in Rwanda. International Journal of Gynecology and Obstetrics 2013;123(SUPPL.1):11–15; doi: 10.1016/j.ijgo.2013.07.005.