

RESEARCH

Open Access



# Husband's influence in the use of long-acting reversible contraception (LARC) method in Special Region of Yogyakarta, Indonesia

Fitriana Putri Utami\* , Erni Gustina, Dedik Sulistiawan, Ratu Matahari and Bakti Permata Sari

## Abstract

**Background:** The long-acting reversible contraceptive method is one way to overcome the high population growth rate. The long-term contraception method is more efficient to regulate pregnancy because it can be used for a long period of time and is safer and more effective and the failure rate is relatively low at 0.2 per 100 users. The strong patriarchal culture in the Special Region of Yogyakarta is one of the factors that determine the wife's decision to use the long-term contraception method. Therefore, this study aims to determine the effect of knowledge, attitudes, and support from husbands in the use of the LARC method in the Special Region of Yogyakarta.

**Method:** This study used secondary data from the 2017 Indonesia Demographic and Health Survey (IDHS) taking the Special Region of Yogyakarta province as a level of analysis or as a place of research. The population was all fertile couples aged 15–49 years as many as 123 couples. The sample was as many as 71 respondents who had made the inclusion criteria refer to criteria used in the 2017 IDHS, namely fertile age couple who used LARC and non-LARC contraception. Data were analyzed by multivariate analysis.

**Results:** The results showed that there is no relationship between husband's knowledge ( $p$  value = 0.330), husband's attitude ( $p$  value = 1.000), and husband's support ( $p$  value = 0.771) on the choice of LARC in the Special Region of Yogyakarta.

**Conclusion:** Even though in a patriarchal culture, husbands do not play a major role in contraceptive choices because of the presence of women empowerment and misinformation about the contraceptive method itself, close communication between husband and wife and the socialization of LARC by health workers is expected to increase its use.

**Keywords:** Husband knowledge, Husband attitudes, Husband support, Long-acting reversible contraceptive

## Background

The population growth rate in Indonesia is still high, as a result of the family planning program which is still experiencing obstacles to date, including not achieving the contraceptive prevalence rate (CPR) in accordance

with the government's target. Based on the Indonesian National Population and Family Planning Board strategic plan in 2018, the target achievement that still needs to be considered is the reduction in the total birth rate which is almost close to the target, namely 2.38 per woman of fertile age in the range of 14–49 years from the 2018 target of 2.31% achieving the target of reducing the birth rate by increasing CPR (Bappenas 2019).

\*Correspondence: [fitriana.utami@ikm.uad.ac.id](mailto:fitriana.utami@ikm.uad.ac.id)  
Department of Reproductive Health, Public Health Faculty, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

Data and Information on Indonesia's Health Profile in 2017 shows that the number of fertile age couple in Indonesia is 37,338,265, while the active family planning acceptors are 23,606,218 (63.22%), consisting of the use of intrauterine device (IUD) 1,688,685 (7.15%), tubectomy medicine 655,762 (2.78), vasectomy 124,262 (0.53%), implant 1,650,227 (6.99%), injections 14,817,663 (62.77%), condoms 288,388 (1.22%), and pills 4,069,844 (17.24%) (BPS, Bkkbn, Kementerian Kesehatan RI 2017).

Reproductive age has entered by the largest cohort of human history. This situation encouraging needs of effective contraceptive method in general and long-acting and permanent contraceptive method in particular (Jacobstein 2007). The national family planning movement has programs to encourage community participation in building independent small families (BKKBN 2015). Using contraception considered as a health promotion, because by control the timing of childbearing, women together with the healthcare provider can ensure that they are healthy and minimizing the risk of complication of pregnancy and childbirth (Ruhl 2012). Therefore, the improvement of this program must continue to be considered and improved because the achievement has not been evenly distributed. The national family planning movement is still lacking in the use of the long-acting reversible contraceptives (LARC). Special Region of Yogyakarta in 2012–2017 experienced an increase in CPR and total fertility rate (TFR); from CPR 59.6 to 76% and TFR from 2.1 to 2.2, this figure has reached the government's target (BKKBN 2015).

The 2018 Indonesian Health Profile shows that there are 497,770 (58.45%) of the fertile age couple in the Special Region of Yogyakarta with 36.64% of participants in the LARC. Meanwhile, the acceptors for IUD were 65,743, tubectomy was 18,932, vasectomy was 3,101 and implant was 18,816 (BPS 2019). The use of LARC in Special Region of Yogyakarta based on the Indonesian National Population and Family Planning Board report is 38.9% while for non-LARC it is 61.61%, and this figure indicates that the use of LARC is lower than non-LARC. The use of LARC has many advantages, both in terms of programs and in terms of users, the use of contraception is also more efficient because it can be used for a long period of time and is safer and more effective, and the failure rate of LARC is relatively low at 0.2 per 100 users (Raidanti and Wahidin 2019). In an economic benefit, the value of avoided abortions and miscarriages for women using no contraception who adopt a LARC is \$20 million over five years (Botfield et al. 2020).

The low use of LARC in Special Region of Yogyakarta is due to low knowledge, as well as a strong patriarchal culture so that the husband has an important role in making the wife's decision, including in terms of contraceptive

use (Kemenkes 2018). Husband's attitudes and support can be a strengthening and encouraging wife in using LARC (KEMENKES RI 2018).

Research that has been conducted by Hastuty and Afiah (2018) on the factors that influence family planning acceptors on the selection of LARC in the Tambang Primary Health Care, Indonesia. in 2018 states that husband's support is an influencing factor in the use of LARC with the results of the Chi-square statistical test obtained a  $p$  value  $< 0.05$  is 0.001, while knowledge also has an influence with the result of the  $p$  value  $< 0.05$ , which is 0.027.

Attitude is a closed response from a person to a certain stimulus or object (Kirani and Windu 2015). Therefore, the husband's knowledge, attitude, and support are needed in the use of LARC. Because good knowledge and encouragement given by the husband, both moral and material, will increase the wife's interest in using LARC. Therefore, the authors are interested in researching the influenced of knowledge, attitudes and support of husbands on the use of LARC in the Special Region of Yogyakarta.

## Methods

This study uses quantitative methods with cross-sectional research design. This study uses secondary data from the 2017 Indonesia Demographic and Health Survey (IDHS). The IDHS is part of an international demographic and health survey program, which is designed to collect data on fertility, family planning, and maternal and child health implemented by the Indonesian Central Statistics Agency, Indonesian National Population and Family Planning Board, and the Ministry of Health of the Republic of Indonesia. IDHS is carried out every five years, and the last IDHS was held in 2017. The 2017 IDHS involved a sample of 1,970 and 34 provinces including the census block.

This study uses the 2017 IDHS data taking the Special Region of Yogyakarta province as a level of analysis or as a place of research. The population in this study was all fertile couples aged 15–49 years in the Special Region of Yogyakarta province as many as 123 couple. The sample in this study was as many as 71 respondents who had met the inclusion criteria, this criterion refers to the criteria used in the 2017 IDHS, namely fertile age couple who used LARC and non-LARC contraceptives. LARC referred to in this study are IUDs, implants, vasectomy and tubectomy. The exclusion criteria in this study were respondents who used non-modern contraception (Coitus Interruptus and Calendar Method). Data analyzed by multivariate analysis.

The data collection instrument was the 2017 IDHS questionnaire. Data on husband's knowledge were

obtained from the husband’s ability to answer questionnaire questions about the types of contraceptive methods, namely tubectomy, vasectomy, IUD, injection, implant, pill, condom, diaphragm/intravag, emergency contraception, lactation amenorrhea method, calendar/periodic abstinence, coitus interrupts, and other ways. Husband’s attitude was measured by agreeing or disagreeing with statements about: Contraception is a woman’s business, women who use contraception can have multiple sexual partners; sterile contraception for men is the same as being castrated, women who can get pregnant so they should be sterilized. Husband’s support is known by the husband’s answers to questions about decision making by the husband to assist the wife in determining the contraceptive to be used.

In conveying the research results, to produce figures that represent the national and provincial levels, respondents in each province must represent the total sample size in proportion to each province. Therefore, if the population in the province is small, it is likely that the sample will not be sufficient for analysis. Therefore, with a small population it is necessary to exaggerate the sample size to overcome this problem, by weighting it.

This weighting is done to obtain statistical figures that represent Indonesia, so the distribution of respondents needs to be weighed (or adjusted mathematically). Therefore, the researchers carried out the weighting used to adjust the number of respondents from each region by producing a smaller or larger sample size than the unweighted sample at the provincial level.

**Results**

The results of this study are divided into four parts, namely a description of the characteristics of the respondents, univariable analysis, bivariable analysis, and multivariable analysis. Demographic characteristics of respondents include age, residential area, education level, and wealth quintile which are described in Table 1

Demographic data of respondents in Table 1 showed that age of most respondents is 35–49 years as many as 47 respondents with a percentage (66.20%). Most of the respondents live in urban area as many as 57 respondents (80.28%). Most of respondents have low educational level as many as 53 respondents with a percentage (74.65%), the largest number of respondents is wealth is rich–very rich as much as 45 with a percentage (63.38%). Univariable analysis for each variable in this research is presented in Table 2.

Based on Table 2, it shows that of the 71 respondents studied who used LARC are 26 respondents with a percentage (36.62%), most of the husband’s knowledge are lack as many as 36 respondents with a percentage (50.70%), most of the husband’s attitude did not agree

**Table 1** Frequency distribution of research respondents characteristics in the Special Region of Yogyakarta

Variable	No weighting		Weighting	
	N	%	N	%
Age				
15–34	24	33.80	30	36.12
35–49	47	66.20	54	63.88
Residential area				
Urban	57	80.28	59	69.83
Rural	14	19.72	25	30.17
Educational level				
High education	18	25.35	20	24.16
Low education	53	74.65	64	75.84
Wealth quintile				
Rich–very rich	45	63.38	50	59.54
Very poor–medium	26	36.62	34	40.46
Total	<b>71</b>	<b>100</b>	<b>84</b>	<b>100</b>

Source: Special Region of Yogyakarta IDHS Data, 2017

**Table 2** The distribution of knowledge, attitudes, and support of the respondents’ husbands for the use of LARC in Special Region of Yogyakarta

Variable	No weighting		Weighting	
	N	%	N	%
Contraception method				
LARC	26	36.62	30	36.04
Non-LARC	45	63.38	54	63.96
Husband’s knowledge				
Lack of knowledge	36	50.70	43	51.55
Good knowledge	35	49.30	41	48.45
Husband’s attitude				
Disagree	60	84.51	70	82.89
Agree	11	15.49	14	17.11
Husband’s support				
Does not support	16	22.54	17	19.75
Support	55	77.46	67	80.25

Source: Special Region of Yogyakarta IDHS Data, 2017

with LARC as many as 60 respondents with a percentage (84.51%), and husbands support their wives as much as 55 respondents with a percentage (77.46%). The bivariable analysis between independent variables (husband’s knowledge, attitude, and support) and dependent variable (use of LARC) is described in Table 3.

Based on Table 3, it shows that out of 71 respondents who have less knowledge, most of them use LARC as many as 25 respondents with a percentage (69.44), husbands who disagree with LARC as many as 38 respondents with a percentage (63.33), and husbands who do

**Table 3** The relationship between knowledge, attitudes, and support of husbands with the use of LARC

Variable	Use of contraceptive method				Total	X <sup>2</sup>	p value
	LARC		Non-LARC				
	N	%	N	%			
Husband's knowledge							
Lack of knowledge	25	69.44	11	30.56	36	1.16	0.330
Good knowledge	20	57.14	15	42.86	35		
Husband's attitude							
Does not agree	38	63.33	22	36.67	60	0.0004	1.000
Agree	7	63.64	4	36.62	11		
Husband's support							
Does not support	11	68.75	5	31.25	16	0.26	0.771
Support	34	61.82	21	38.18	55		

Source: Special Region of Yogyakarta IDHS Data Couple Recod, 2017

not support wives to use LARC as many as 34 respondents with a percentage (61.82%). The results of statistical tests on the husband's knowledge variable using the Chi-square value obtained *p* value > 0.05, namely 0.330, which means there is no relationship between husband's knowledge and use of LARC. In the attitude variable, the statistical test results using Chi-square obtained a *p* value > 0.05, namely 1.00, which means that there is no relationship between husband's attitude and use of LARC, and the husband's support variable obtained a *p* value > 0.05, namely 0.771 which means there is no the relationship between husband's support and the use of LARC. Multivariable analysis of all variables is described in Table 4.

Based on Table 4, in this multivariable result, there are unadjusted and adjusted results. The difference is that unadjusted is the result of the odds ratio (OR), and this odds ratio is used to determine the difference in risk in case-control studies. While this adjusted is the result of multivariable categorical data analysis with the binary/binomial dependent variable using multiple logistic regression. The unadjusted results on the knowledge variable found that husbands who had good knowledge were 1.70 times more likely to use LARC contraception than husbands who had less knowledge, but it was not statistically significant. Meanwhile, the adjusted results found that husbands who had good knowledge of 1.78 times to use LARC contraception compared to husbands who had less knowledge were not statistically significant. In the unadjusted attitude variable, it was found that the husband who had an agreed attitude was 0.98 times to use LARC compared to the husband who had a disagreement attitude, which was not statistically significant. In the adjusted results, it is found that husbands who have an agreed attitude of 1.44 times to use LARC are compared

to husbands who have a disagreeing attitude, statistically not significant, and in the variable of husband's support, the unadjusted results show that husbands who support their wives are 1.35 times to use LARC compared to husbands who do not support their wives are not statistically significant. In adjusted results, it is found that husbands who support their wives 1.17 times to use LARC than husbands who do not support their wives are statistically insignificant.

**Discussion**

**Husband's knowledge of the use of LARC**

The results of the research on statistical test analysis showed that the *p* value = 0.330, and this indicates that there is no relationship between the husband's knowledge and the use of LARC in the Special Region of Yogyakarta. Then from 36 respondents who had less knowledge, most of them used LARC as many as 25 respondents with a percentage (69.44). The closeness analysis of the two variables obtained an OR value of 1.70 (95% CI = 0.57–5.08), meaning that respondents with good knowledge had 1.70 times the chance to use LARC compared to husbands who had less knowledge.

Knowledge in this study is knowledge possessed by husbands related to contraception, namely the benefits of various contraceptives, side effects, and effectiveness of contraceptives. The results of this study are in line with research conducted by Nurlilis and Winda (2016) on the effect of the desire of fertile age couples in the use of LARC, with the results that some respondents have good knowledge, non-LARC is lacking, showing *p* value = 0.702 which means there is no relationship meaningful between the level of knowledge and the use of LARC. In theory, knowledge is a very important domain for the formation of one's behavior. If a person's

**Table 4** The relationship between knowledge, attitudes, and support of the husband after considering the characteristics of the respondent

Variable	Use of contraceptive method			Odds ratio (90% CI)	
	Non-LARC	LARC	N	Unadjusted	Adjusted
	%	%			
Age					
35–49	60.43	39.57	54	1	1
15–34	70.20	29.80	30	0.60 [0.17–1.93]	0.69 [0.20–1.77]
Residential area					
Urban	63.43	36.57	59	1	1
Rural	65.18	34.82	25	0.95 [0.22–3.69]	1.00 [0.25–3.89]
Educational level					
High education	65.78	34.22	20	1	1
Low education	63.38	36.62	64	0.87 [0.25–3.15]	0.89 [0.25–3.07]
Wealth Quintile					
Rich–very rich	61.15	38.85	50	1	1
Very poor—medium	68.10	31.90	34	0.87 [0.27–2.65]	0.97 [0.28–3.34]
Husband’s knowledge					
Lack of knowledge	68.36	31.64	43	1	1
Good knowledge	59.28	40.72	41	1.70 [0.57–5.08]	1.78 [-0.65–4.8]
Husband’s attitude					
Disagree	64.89	35.11	70	1	1
Agree	59.44	40.56	14	0.98 [0.18–4.41]	1.44 [0.43–4.84]
Husband’s support					
Does not support	69.95	30.05	16	1	1
Support	62.48	37.52	67	1.35 [0.36–5.68]	1.17 [0.29–4.67]

Source: Data Couple Recod IDHS,2017

behavior change is based on knowledge, the behavior is expected to last a long time and be permanent (Nurul and Nurhabibah 2018). This theory implies that the level of knowledge is not always in line with behavior (providing behavior change), because behavior changes itself require a long learning process.

According to the researcher’s analysis, based on the results at the level of education, it shows that most of the respondents have a low education of 74.65%, so it greatly affects the respondent’s knowledge because someone’s knowledge can influence the decision-making process and behavior changes to accept something new such as the use of contraception. In theory, education is an effort of persuasion or learning to people to take actions in overcoming problems and improve their health. This change in health care is generated by education based on knowledge and awareness through the learning process (Nurul and Nurhabibah 2018). This theory implies that if the resulting education is low, knowledge will also be low so that it cannot provide behavior change in improving and overcoming health problems, in this case the behavior of using LARC.

One way to increase knowledge is health education. Previous research (Nurul and Nurhabibah 2018) states that someone’s knowledge is the result of knowing, which occurs from the result of sensing a certain object. One persistent barrier is misinformation about the safety and availability of LARC, especially for teens (Aligne et al. 2020).

Misinformation on husband also plays a key factor for not using contraception (Herbert 2015), but this was not shown to be significant in this study. It is possible that in addition to misinformation on husbands, there are other factors that also influence the choice of contraception, namely husband dominance in decision-making, and opposition opinions between husband and wife (Herbert 2015). Therefore, it is necessary for health workers, especially to provide counseling to husbands, not only to wives, so that public knowledge can be broad.

**Husband’s attitude towards using LARC**

The results of the statistical test analysis obtained *p* value > 0.05, namely 1,000, which means there is no relationship between husband’s attitude and use of LARC.

The closeness analysis of the two variables obtained an OR value of 0.98 [0.18–4.41] meaning that respondents with an agreeable attitude were 0.98 times to use LARC contraception compared to husbands who agreed, and in the adjusted results it was found that husbands who had an agreed attitude had 1.44 times the chance to use LARC. It was statistically not significant compared to husbands who disagree.

Based on the results of previous research, most of the respondents had a good attitude and chose non-hormonal LARC, namely 55.69% because most respondents in this study had a good attitude due to positive respondents' trust, but if the respondents' trust was negative, it could cause negative attitude too. The Chi-square test value was  $p=0.027$ , which means that there is a relationship between attitude and non-hormonal LARC selection. The OR results obtained a value of 2.041, which means that respondents with a good attitude 2.041 times to choose non-hormonal LARC were compared with respondents who had a bad attitude (Nurlilis and Winda 2016).

In theory, attitude is a person's closed response to certain objects, which involves opinion factors (agree–disagree, good–bad, and so on) (Nurul and Nurhabibah 2018). The meaning of this theory is that the husband's participation is needed both in the form of a response that involves opinion factors that can help the wife in choosing the contraceptive method to be used. The results of research conducted by Nurul (2016) show that the husband's attitude can be influenced by education, occupation, age, and sources of information. Based on the theory (Syarifah 2016), the level of education determines the family planning pattern and the basis for contraceptive use. Therefore, if education is low, knowledge will also be narrow so that the husband's attitude in participating in determining family planning decreases. The results of this study indicate that the majority level of respondent education is in a low level of education of 74.65%, and this is very influential on the husband's attitude in responding to giving an opinion in helping his wife to determine which contraception to use.

In the form of patriarchal society, on the previous research (Mattebo et al. 2016) it shows that traditionally, the man is in charge on making decisions regarding to family planning. However, women are not autonomous. On several occasions, a woman may be disagree with the husband attitude towards family planning and denied the use of contraceptives by her husband. This can happen because of the women empowerment. More empowered women who more able to make household decision based on her own and joint household decisions with husband are more likely to use either short-term or LARC methods rather than not using contraception at all (Ings 2017).

### **Husband's support with the use of LARC**

Husband support in family planning is a characteristic given during an ongoing relationship with his wife, such as the participation of men in supporting their wives to participate in the family planning program, not only taking their wives to health services or simply facilitating with financial materials but also accompanying their wives during installation contraception and family planning counseling (Sumartini and Indriani 2016).

The results of the statistical test analysis showed that the  $p$  value = 0.26, and this indicates that there is no relationship between husband's support and the use of LARC in the Province of Yogyakarta Special Region. The closeness analysis of the two variables obtained an OR value of 1.35 [0.36–5.68] meaning that respondents who supported their wives were 1.35 times more likely to use LARC compared to husbands who did not support their wives, and in the adjusted results it was found that husbands who supported their wives had 1.17 times chance to use LARC compared husbands who do not support their wives are not statistically significant.

Husband's support is very important to encourage wife's interest in family planning. Therefore, wives should get comfort in using contraception which is obtained from family support, especially from husbands. The husband is the holder of power in the family in making decisions for the wife in family planning. Husband does not support because of low knowledge. The results of this study indicate that the majority of husbands have low knowledge as many as 25 respondents with a percentage (69.44) due to the lack of support from their husbands and less participation of husbands in family planning, unwilling to take their wives to health service and low economic conditions so they are unable meet in terms of financial material such as money. However, some of the husbands who have low knowledge do participate in family planning, by taking advantage of various free programs provided by the government to regulate the number of children (Sri et al. 2016).

This study is in line with research conducted by Notostmodjo (2010). The results of the Chi-square test obtained a value of = 0.835, indicating that there is no relationship between husband's support and the selection of non-hormonal LARC. This study explains that the husband's perception of LARC on family planning knowledge is still wrong, with the results of the interview about the complaints of side effects felt by the wife in using LARC which is now considered normal; when the wife uses the IUD, then vaginal discharge occurs, and the husband thinks that the discharge occurs because it is caused by a side effect of the IUD, even though the relationship is related to cleanliness, not a side effect of the IUD and some say that when his wife uses the IUD, when having

sex, the husband's reproductive organ (penis) feels like being pricked by a needle. From the results of the interview, it was found that most husbands did not get information about LARC, which led to low knowledge and advised their wives not to use LARC. Therefore, health workers can provide counseling to husbands to increase knowledge so that husbands can improve communication with wives through exchanging information with each other and can provide support to wives and that this counseling can increase husbands' knowledge about family planning.

This study shows that husband is not significantly involved in the selection of LARC. Based on previous studies (Bharadwaj et al. 2012), three important factors on choosing a contraceptive methods are high efficacy, availability of protection against sexual transmitted disease, and non-interference with sex activity. In the other hands, the possibility of altering the menstrual pattern, and reversibility were not considered important. Therefore, it is very possible that husband is not an important factor in choosing contraception.

## Conclusions

There is no relationship between the husband's knowledge, attitude, and support with the use of LARC in the Special Region of Yogyakarta. Even though in a patriarchal culture, husbands do not play a major role in contraceptive choices because of the presence of women empowerment and misinformation about contraceptive method itself, it is hoped that husbands and wives can improve good communication in determining contraceptives to use and gain broader insight into contraceptive methods by regularly attending health education events and conducting counseling with health workers who will be used by their wives and can provide full support to their wives to encourage the wife's interest in family planning. It is hoped that health workers can provide counseling on various contraceptives with the target not only of wives but also to husbands, so that the husband's knowledge can increase and can encourage the husband's participation to support his wife in family planning.

## Abbreviations

CPR: Contraceptive prevalence rate; IDHS: Indonesia Demographic and Health Survey; IUD: Intrauterine device; LARC: Long-acting reversible contraceptives; OR: Odds ratio; TFR: Total fertility rate.

## Acknowledgements

Researchers would like to thank to the National Population and Family Planning Board representatives of Special Region of Yogyakarta for the data provided.

## Authors' contributions

FPU, EG, DS, RM contributed to study concept and design. FPU, EG, DS, RM contributed to acquisition. DS and BPS contributed to statistical analysis. All authors analyzed and interpreted the data. BPS contributed to technical

support. FPU drafted the manuscript. FPU and EG revised the manuscript. All authors read and approved the final manuscript.

## Author's Information

FPU, EG, DS, and RM are lecturer in Public Health Faculty, Universitas Ahmad Dahlan with the concentration of Reproductive Health. BPS is senior bachelor student in Public Health Faculty Universitas Ahmad Dahlan.

## Funding

This research was totally funded by Universitas Ahmad Dahlan Research and Community Service Institute.

## Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Declarations

### Ethical approval and consent to participate

This research has received ethical approval by Universitas Ahmad Dahlan ethical committee with the number of approval 012004017 obtained on July 11, 2020. This study used secondary data from the 2017 IDHS so that researchers did not meet, take data, and ask for consent directly from the study participant.

### Consent for publication

No applicable.

### Competing interests

The authors declare that they have no competing interest.

Received: 26 November 2021 Accepted: 17 March 2022

Published online: 01 April 2022

## References

- Aligne CA, Phelps R, VanScott JL, Korones SA, Greenberg KB (2020) Impact of the Rochester LARC Initiative on adolescents' utilization of long-acting reversible contraception. *Am J Obstet Gynecol* [Internet]. 222(4):S890.e1-S890.e6. <https://doi.org/10.1016/j.jajog.2020.01.029>
- Bappenas (2019) Jumlah Penduduk Indonesia Menurut Kelompok Umur Dan Jenis Kelamin. [Internet]. *Databoks.katadata.co.id*
- Bharadwaj P, Akintomide H, Brima N, Copas A, D'Souza R (2012) Determinants of long-acting reversible contraceptive (LARC) use by adolescent girls and young women. *Eur J Contracept Reprod Health Care* 17(4):298–306
- BKKBN (2015) Laporan Kinerja Pemerintah. Jakarta
- Botfield JR, Lacey S, Fleming K, McGeehan K, Bateson D (2020) Increasing the accessibility of long-acting reversible contraceptives through nurse-led insertions: a cost-benefit analysis. *Collegian* [internet] 27(1):109–114. <https://doi.org/10.1016/j.colegn.2019.05.001>
- BPS (2019) Statistik Indonesia. Jakarta
- BPS, BKKBN, Kementerian Kesehatan RI (2017) Survei Demografi dan Kesehatan Indonesia 2017. Jakarta
- Hastuty M, Afiah A (2018) Faktor-Faktor Yang Mempengaruhi Perilaku Aseptor KB Terhadap Pemilihan MKJP Di Wilayah Kerja Puskesmas Tambang Tahun 2018. *Doppler Univ Pahlawan Tuanku Tambusai*, pp 1–10
- Herbert S (2015) Social norms, contraception and family planning. *GSDRC Helpdesk Research Report*, pp 1–15
- Ings KEYF (2017) Women's empowerment and contraceptive method use in Egypt *Gol e n S a m a r i*, pp 1–2
- Jacobstein R (2007) Long-acting and permanent contraception: an international development, service delivery perspective. *J Midwifery Women's Health* 52(4):361–367
- Kemenkes R (2018) Profile Kesehatan Indonesia Tahun 2017. Ministry of Health Indonesia, pp 107–108 p
- KEMENKES RI (2018) Profil Kesehatan D.I. Yogyakarta 2017

- Kirani H, Windu P (2015) Hubungan Budaya Patriarki Dan Pemahaman Informasi KB dengan Kepesertaan Kontrasepsi. *Biomertika Dan Kependud*, pp 162–71
- Mattebo M, Dahlkvist E, Erlandsson K (2016) Perceptions of the role of the man in family planning, during pregnancy and childbirth: a qualitative study with fifteen Nepali men. *J Asian Midwives* 3(1):31–45
- Notostmodjo S (2010) *Promosi Kesehatan Teori Dan Aplikasi*. Rineka Cipta, Jakarta
- Nurlilis, Winda A (2016) Hubungan Pengetahuan Ibu Dan Dukungan Suami Dengan Pemakaian Kontrasepsi Jangka Panjang Di Wilayah Kerja Puskesmas Rumbai Pesisir. *Photon*, pp 75–9.
- Nurul Y (2016) Gambaran Pengetahuan Suami dan Sikap Suami Tentang Alat Kontrasepsi Di Dusun Soreang Desa Jipang Kecamatan Bontonompo Selatan Kabupaten Gowa 2016, pp 2–99
- Nurul H, Nurhabibah L (2018) Hubungan Pengetahuan Dan Dukungan Suami Terhadap Pemilihan Kontrasepsi Tubektomi. *Kaji Ilm Probl Kesehat*, pp 421–428
- Raidanti D, Wahidin W (2019) Hubungan Pengetahuan dan Dukungan Suami dengan Pemakaian Kontrasepsi Intra Uterine Device (IUD) di Wilayah Kerja Puskesmas Salemban Jaya Kabupaten Tangerang Banten Tahun 2019. *JKFT: Universitas Muhamadiyah Tangerang*, pp 56–66
- Ruhl C (2012) Contraception is health promotion. *Nurs Womens Health* [internet] 16(1):73–77. <https://doi.org/10.1111/j.1751-486X.2012.01703.x>
- Sri S, Bagus W, Tinuk I (2016) Analisis Faktor-Faktor Yang Mempengaruhi Pemilihan Metode Kontrasepsi Jangka Panjang (MKJP) Pada Wanita Pasangan Usia Subur (PUS) Di Kabupaten Kendal Tahun 2013. *Promosi Kesehat Indones*, pp 32–46
- Sumartini S, Indriani D (2016) Pengaruh Keinginan Pasangan Usia Subur (PUS) dalam Penggunaan Metode Kontrasepsi Jangka Panjang. *Biomtrika dan Kependud*
- Syarifah N (2016) Hubungan Tingkat Pengetahuan Akseptor Wanita Tentang MKJP Dengan Minat Pemilihan Metode Kontrasepsi Di Puskesmas Tegalrejo Yogyakarta. *Universitas Aisyiyah Yogyakarta*

### Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Submit your manuscript to a SpringerOpen<sup>®</sup> journal and benefit from:

- ▶ Convenient online submission
- ▶ Rigorous peer review
- ▶ Open access: articles freely available online
- ▶ High visibility within the field
- ▶ Retaining the copyright to your article

---

Submit your next manuscript at ▶ [springeropen.com](https://www.springeropen.com)

---