Jurnal Ilmu dan Teknologi Kesehatan
Vol 10, No 1, September 2022
ISSN: 2338-9095 (Print)
ISSN: 2338-9109 (online)

Ideation Factors on Long-Acting Reversible Contraception Practices Among Family Planning Clients

Sarah Handayani[1*], Izza Suraya[1], Nur Asiah[1], Nurkholis Majid[2]
[1]Faculty of Health Sciences Universitas Muhammadiyah Prof. Dr HAMKA, Jakarta, Indonesia
[2]Centers for Health Policy and Management Universitas Gadjah Mada, Yogyakarta, Indonesia
**Email: sarah_handayani@uhamka.ac.id*

Article history

Posted, Feb 11th, 2022
Reviewed, Aug 20th, 2022
Received, Sept 28th, 2022

ABSTRACT
Ideation is a new way of thinking involving the diffusion of these ideas through social interaction in local, culturally homogeneous communities. Making decisions about behavior depends on ideation factors. This study aimed to determine ideation factors associated with long-acting contraceptive behavior among family planning (FP) clients in East and North Jakarta. The data was derived from the "My Choice District Mini-Survey" conducted in East and North Jakarta between November and December 2016. The sample involved 720 women from both districts using a multi-stage cluster sampling process. An ideation factor was constructed from knowledge, attitude, social support, and interpersonal discussion on "Long Acting and Reversible Contraception" (LARC). A logistic regression analysis was performed to identify the most dominant factors associated with long-acting contraceptive behavior. This study found that the number of family planning clients who used LARC was 223 (30%). Of the percentage of using LARC attributed to each ideational score, the highest was 47%, and the lowest was 11%. The knowledge of LARC that can be used for spacing was the strongest ideation variable with Adjusted Odds Ratio (AOR) = 4.55 (95% CI = 3.13 -6.61; p-value =0.000); followed by limiting with AOR 3.46 (95% CI 1.61 - 7.45; p-value= 0.001). The study confirmed the correlation between ideation factors on LARC and its use. To increase the number of LARC users, we should improve the supply side program by increasing FP clients' knowledge about LARC and shifting attitudes on LARC into positives.
Keywords*: family planning; ideation; long-acting permanent method (LARC)*

ABSTRAK
Ideation 'membuat ide' adalah cara berpikir baru yang melibatkan penyebaran ide-ide berpikir ini menggunakan interaksi sosial dalam komunitas lokal yang homogen secara budaya. Membuat keputusan terkait dengan perilaku tergantung pada faktor *ideation.* Penelitian ini bertujuan untuk mengetahui faktor *ideation* yang berhubungan dengan perilaku penggunaan

DOI: 10.32668/jitek.v10i1.864

Metode Kontrasepsi Jangka Panjang (MKJP) pada akseptor KB di Jakarta Timur dan Jakarta Utara. Data diambil dari Survei Mini Distrik *My Choice* yang dilakukan di Jakarta Timur dan Jakarta Utara. Pengambilan data dilakukan pada bulan November dan Desember 2016. Sampel melibatkan 720 perempuan dari kedua kotamadya menggunakan proses *multi-stage cluster sampling*. Faktor *ideation* dibangun dari pengetahuan, sikap, dukungan sosial dan diskusi interpersonal tentang MKJP. Analisis regresi logistik dilakukan untuk mengidentifikasi faktor yang paling dominan terkait dengan perilaku kontrasepsi jangka panjang. Hasil penelitian ini didapatkan jumlah klien KB yang menggunakan MKJP sebanyak 223 (30%). Dari persentase penggunaan MKJP yang dikaitkan dengan setiap skor *ideation*, tertinggi adalah 47%, dan terendah adalah 11%. Pengetahuan tentang MKJP yang dapat digunakan untuk spasi merupakan variabel *ideation* terkuat dengan *Adjusted Odds Ratio* (AOR) = 4,55 (95% CI = 3,13 -6,61; p-*value* =0,000); diikuti dengan limiting dengan AOR 3,46 (95% CI 1,61 - 7,45; p-*value*= 0,001). Studi ini mengkonfirmasi hubungan antara faktor *ideation* tentang penggunaan MKJP. Untuk meningkatkan jumlah pengguna MKJP, diperlukan peningkatan program pengetahuan akseptor KB tentang MKJP dan mengubah sikap tentang MKJP menjadi positif.
Kata kunci: keluarga berencana; *ideation* -membuat ide-; Metode Kontrasepsi Jangka Panjang (MKJP)

INTRODUCTION

Family planning is the use of contraceptives to meet fertility needs. With a variety of contraceptive options, they have the opportunity to choose the type of contraceptive used. Based on the effectiveness of contraceptives in preventing pregnancy, the most effective kind of contraception is the LARC, such as the Intra Uterine Device (IUD), implant, tubectomy, and vasectomy. In addition to being efficient, LARC is safe, comfortable, and can protect women from unwanted pregnancies while being cost-effective and achieving low drop-out rates (Luis Bahamondes *et al.*, 2020). Even though the fact that LARC is an effective contraception method, it is not the primary choice for FP clients in Jakarta.

Nevertheless, the popularity of non-LARC, according to the last report, Indonesia Health Demography Survey (IDHS), is higher than LARC. The use of LARC decreased from 1997 to 2017, from 13.3% to 3.9%. On the other hand, the pill increased from 14,8% (1991) to 12.1% (2017), and also injections from 11,7% to 29% (2017). The number of IUD users of one type of LARC has also declined from 1991 to 2012, from 28.3% to 4.7%. The decline in LARC usage is one of the causes of FP program failure, marked by a stagnant TFR number. From 2002-2012, the trend Total Fertility Rate (TFR) in Indonesia stagnated at about 2.6 but decreased to 2.4 (BPS;BKKBN;Kemenkes; MEASURE DHS, 2012; BPS, 2017).

DOI: 10.32668/jitek.v10i1.864

The mixing of myths with facts about contraception is found in FP clients in Indonesia. Research on LARC in six provinces in Indonesia found many rumors about IUD failure that made people afraid of LARC, such as the prohibition from their husbands and the side effects of IUD perceived by the acceptors (Lilestina, 2011). Myths and misconceptions about contraception result in an improper choice of acceptors of contraceptives or nonuse of contraceptives (Hindin, McGough and Adanu, 2014). Besides that, other reasons ranged from fear of side effects to the source of obtaining contraceptives associated with FP practices(Cheng, 2011; Ezebialu and Eke, 2013; Anguzu *et al.*, 2014; Anjum, Durgawale and Shinde, 2014; Mansor *et al.*, 2015).

The adoption of family planning methods has led to a decline in fertility. In the early decades of the 20th century, there was a shift in the history of child-rearing patterns across the Western world (Kramer *et al.*, 2021). These changes occurred because of the changing behavior in contraceptive adoption that affects fertility decline (Kincaid, 2004). One of the explanations behind the decrease in fertility is the existence of social changes that include attitudes and behavior that spread from individual to community level through social interaction (Bulato, Rodolfo; Casterline, 2001).

The debate about the determinant of Ideation versus development on fertility reduction has been ongoing since Cleland and Wilson's study of fertility transition was published in 1987 (Storey, 2009). Some socio-demographic literature has identified Ideation (Ali and Cleland, 2010) and social interaction as essential determinants of fertility decline. In their last analysis of developing countries, Bongaarts and Watkins concluded that self-development is inadequate for some experimental factors related to fertility transition. When a minor group adopts contraception use, social interaction can become more robust and encourage a shift towards a broader society(Bongaarts, 2005).

Ideation is hence constructed as a model with three components, each of which comprises several elements: cognitive (knowledge, attitudes, perceived risk, subjective norms, and self-image); emotional (emotional response, empathy, and self-efficacy); and social interaction (social support and influence, spousal communication and personal advocacy (Kincaid, 2000). The previous study found that the contraceptive behavior of friends

DOI: 10.32668/jitek.v10i1.864

and family is more influential than women's characteristics and that community-level factors also influence contraceptive use (Colleran and Mace, 2019). Several studies mentioned that contraceptive selection is influenced by social interactions: the couple's attitude and support and friends' support and influence. Other studies described contraceptive use behavior as influenced by a person's cognitive factors, such as one's beliefs, values, and self-confidence. These three demands (mental, emotional, and social interactions) are known by the ideation factor (Kincaid, 2000). This research thus seeks to answer the following question: Are all the dimensions of Ideation significant predictors of the practice of LARC di East and North Jakarta? Thus, this study has aimed to determine ideation factors associated with long-acting contraceptive behavior among FP clients in East and North Jakarta.

METHOD

Study Design and Sampling Procedure

This study is derived from the My Choice Mini District Survey conducted in 2016 by the Center for Health Policy and Management Faculty of Medicine Universitas of Gadjah Mada. This study used a cross-sectional research design with 720 women using contraception when collecting data. Our individual-level unit of analysis is currently married women of reproductive age, 15-49 years old, who have used modern contraception. Survey respondents in East and North Jakarta districts were chosen via a multi-stage cluster sampling process. A four-stage cluster sampling scheme, with two procedural options at the final stage, was proposed as follows:

Stage 1: Selected 30 Kelurahan from each city/district using a systematic random sampling (SYS) procedure with probability proportional to size (PPS)

Stage 2: Selected one RW in each Kelurahan via simple random sampling (SRS)

Stage 3: Selected one RT from each RW via simple random sampling (SRS)

Stage 4: On a map, divide each sample RT into two (2) segments of approximately equal size (about 20 households/families per segment based upon an average RT size of 40 households/ families per RT), and choose one segment SRS. Interview all MWRA in each sample segment selected.

Instrument Development and Data Collection Procedure

The questionnaire was developed and modified from previous studies(PPKUI, 2013) (BPS;BKKBN;Kemenkes;

DOI: 10.32668/jitek.v10i1.864

MEASURE DHS, 2012). As one of the objectives of the rapid survey trials was to provide mid-term estimates of selected My-Choice indicators, a modified version of the questionnaire used in the mid-term My-Choice Annual District Survey was used in the rapid survey. The instrument was deemed crucial as differences in the wording of the question, and the amount of respondent probing to be undertaken could very well confound the measurement of trends. The significant changes were regarding the identification block at the beginning questionnaire. It was necessary since a different sampling scheme will be used in a rapid survey than in the Annual District Survey. The independent variables assessed in the present study were Ideation factor-derived 18 questions to construct an appropriate measurement of Ideation.

Box 1. Item Used to Compute Score of Ideation

Knowledge	1) Recall IUD
	2) Recall implants
	3) Identify IUDs and implants as limiting methods
	4) Identify IUDs and implants as spacing methods
	5) Know that IUDs can last 3-12 years
	6) Know that implants can last 3-5 years
Attitude	7) Preference for IUDs to 'easy to get.'
	8) Preference for IUDs to be 'easy to use.'
	9) Preference for IUD to be 'effective.'
	10) Preference for IUD to 'have less side-effect.'
	11) Preference for IUDs to be 'long-lasting.'
	12) Preference for Implant to 'easy to get.'
	13) Preference for Implant to 'easy to use.'
	14) Preference for Implant to 'easy to effective.'
	15) Preference for Implant to 'have less side effect.'
	16) Preference for Implant to be 'long-lasting.'
Social Support	17) Report that provider recommended LARC
Interpersonal Discussion	18) Had you ever discussed FP with the spouse

Ethical Considerations

The research team obtained a letter confirming it had passed ethical clearance from the Ethical Commission of Faculty Medicine Universitas of Gadjah Mada.

Data Processing and Analysis

Data collection is done through an electronic system using an e-questionnaire in digital devices provided to each data collector. After the data was sent electronically to the database on the server, it was compiled and analyzed using the software statistic Stata version 14.1 (Stata Corp, Texas, USA). Bivariate and multivariate analyses were performed to assess the effect of ideation factors on LARC contraceptive use.

DOI: 10.32668/jitek.v10i1.864

RESULTS AND DISCUSSION

Some 1165 women were selected for this study. The 445 of them were excluded because of not using modern contraception. Therefore, only 720 women were eligible for this study. The study found that the LARC practice prevalence rate among the study population was 29% (110) in North Jakarta and 33% (113) in East Jakarta, or 223 (31%) in both districts. The most significant number of respondents were aged 36-50 years age (table 1).

Table 1. Distribution of Respondent in Two Districts (n=720)

Individual Level Variables	North Jakarta % (n=377)	East Jakarta % (n=343)	Total % (n=720)
Current use of modern contraceptive			
LARC	29% (110)	33% (113)	31% (223)
Non-LARC	71% (267)	67% (230)	69% (497)
Mothers age			
15-20	1% (4)	2% (7)	2% (11)
21-35	48% (181)	38% (130)	43% (311)
36-50	51% (192)	60% (206)	55% (398)

Since its inception in the early 1970s, the Indonesia family planning program has contributed to reducing fertility and maternal mortality. Injectables and oral contraception have contributed to the increase of contemporary contraceptive methods in Indonesia over the past three decades, as they are the most often used contraceptives. Creating community long-acting contraceptive demands is essential to achieving the projected modern contraceptive prevalence rate of 63,4 percent by 2024, as specified in the Indonesia Midterm National Development Plan 2020-2024 (President, 2020). We can draw several tentative conclusions from our analysis. LARC users in East and North Jakarta are almost the same as the numbers in Indonesia's Demographic and Health Surveys at the national level. The data reveal that knowledge of LARC is relatively low; only around half of the women can recall any IUD and implants. This study found that the knowledge of implants is not significantly associated with using LARC, different from the knowledge of IUD.

This finding found the same pattern with the latest Indonesian Demographic Health Survey in Indonesia, non-LARC, the knowledge of non-LARC, such as pill and injection are the two most popular methods (BPS, 2017). The preference for the selection of non-LARC is also related to

DOI: 10.32668/jitek.v10i1.864

their knowledge and attitude toward non-LARC (Gayatri, 2020).

Among the ideation factors determining knowledge on LARC, the knowledge of respondents in North Jakarta was higher than in East, except for the question about identifying IUD and implants as a spacing method. To measure attitudes in both districts, among the attitude measurements was the statement about IUD and implants being long-lasting expressed as a negative attitude (table 2).

Table 2. Distribution of Ideation Factors in Two Districts (n=720)

Individual Level Variables	North Jakarta % (n= 377)	East Jakarta % (=343)
Knowledge on LARC		
Recall of implants		
Yes	85% (320)	73% (249)
No	15% (57)	27% (94)
Recall of IUD		
Yes	86% (325)	86% (296)
No	14% (52)	14% (47)
Identify IUD and implant as limiting methods		
Yes	87% (328)	88% (301)
No	13% (49)	12% (42)
Identify IUD and implant as spacing methods		
Yes	27% (102)	38% (131)
No	73% (275)	62% (212)
Know that implant can last 3-5 years		
Yes	68% (258)	63% (217)
No	32% (119)	37% (126)
Know that IUD can last 3-5 years		
Yes	82% (310)	81% (278)
No	18% (67)	19% (65)
Attitude on LARC, they believe that IUD is:		
Easy to use		
Negative	47% (177)	51% (176)
Positive	53% (200)	49% (167)
Easy to get		
Negative	38% (145)	33% (114)
Positive	62% (232)	67% (229)
Effective		
Negative	41% (153)	37% (127)
Positive	59% (224)	63% (216)
Less side effects		
Negative	47% (177)	44.9% (163)
Positive	53% (200)	49.5% (180)
Long-lasting		
Negative	67% (254)	58% (198)
Positive	43% (123)	42% (145)
They believe that the implant is:		
Easy to use		
Negative	48% (182)	57% (195)
Positive	52% (195)	43% (148)
Easy to get		
Negative	43% (162)	50% (171)
Positive	57% (215)	50% (172)

DOI: 10.32668/jitek.v10i1.864

Individual Level Variables	North Jakarta % (n= 377)	East Jakarta % (=343)
Effective		
Negative	65% (246)	68% (233)
Positive	35% (131)	32% (110)
Less side effect		
Negative	54% (202)	61% (209)
Positive	46% (175)	49% (134)
Long-lasting		
Negative	58% (218)	57% (196)
Positive	42% (159)	43% (147)
Social support reported that the provider recommended LARC		
No	53% (199)	44% (150)
Yes	47% (178)	56% (193)
Interpersonal discussion discussed with spouse about FP		
No	45% (171)	44% (151)
Yes	55% (206)	56% (192)

Knowledge of the regulation of birth and FP is one prerequisite for understanding and using appropriate and effective contraceptive methods. Respondents' knowledge about contraceptive methods is obtained by asking about all types of contraceptive devices that have been heard to delay or avoid pregnancy and birth. The knowledges of IUD and implant as limiting methods is higher than spacing is significantly correlated with the use of LARC. The logistic regression analysis answered research question two, finding that the strongest predictors were knowledge of IUDs and implants that served the spacing method. Similar to some studies, knowledge about the previous use of LARC influencing their contraceptive decisions was positively associated with the current use of LARC (Ezebialu and Eke, 2013; Anguzu *et al.*, 2014; Anjum, Durgawale and Shinde, 2014). A study in the United States found that two-thirds of respondents significantly overestimated the efficiency of more traditional contraceptive options, such as condoms and oral contraceptives (Kakaiya, Lopez and Nelson, 2017).

The prior study documented that the most prevalent reasons for selecting non-LARC techniques were convenience of access, reduced cost, privacy, perceived fewer adverse effects, and the ability to discontinue use without consulting a health provider. The client's level of education and the number of their children appeared to be significant personal factors. Method availability seems to be a critical structural component (Tibaijuka *et al.*, 2017). The percentage of LARC users was attributed to each ideation score: the highest was 47%, and the lowest was 11% (Figure 1) shows the ideation score and the practice of

DOI: 10.32668/jitek.v10i1.864

contraception. The higher the ideation score, the higher the rate of respondents using the LARC.

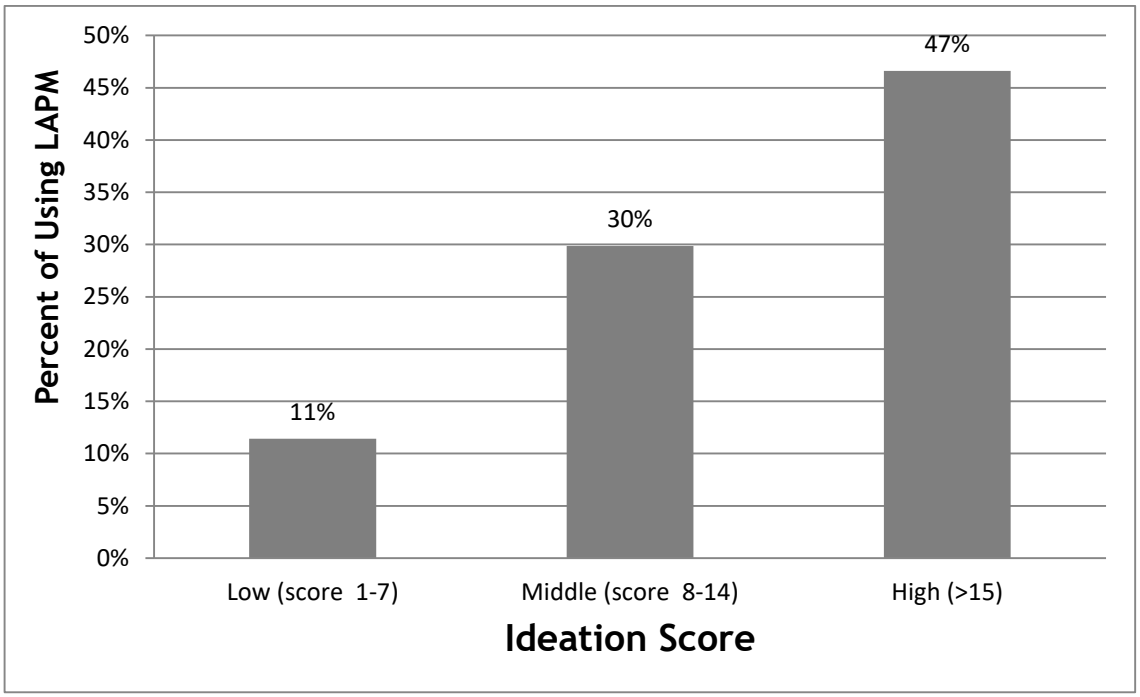

Figure 1. Ideation Factors on Contraceptive Behavior (n=720)

This current study observed ideation factors among FP clients in East and North Jakarta. The finding showed that most respondents had a low to high ideation score. This study hence answers research question one that ideation factors on LARC are related to the practice of LARC. This finding is similar to the research done by Babalola in Kenya and Nigeria. However, that study found all ideation factors related to LARC practice, while this study did not find all the associated factors. All the dimensions of Ideation are strongly related to contraceptive use intention in Nigeria but only perceived self-efficacy was meaningfully related to contraceptive use intention in Kenya (Babalola *et al.*, 2019).

DOI: 10.32668/jitek.v10i1.864

Table 3. Relationship of Ideation Factors and LARC Practice

Variables	Modern Contraceptive		Crude PR (95%CI)	Crude OR (95%CI)	p-value
	LARC %(n)	Non-LARC %(n)			
Knowledge					
Recall of implants					
Yes	25%(180)	54%(389)	1.11 (0.84 – 1.47)	1.16(0.8-1.8)	0.46
No	6%(43)	15%(108)			
Recall of IUD					
Yes	29%(207)	58%(414)	2.06 (1.29 – 3.27)	2.59(1.4 -4.9)	0.0006
No	2%(16)	12%(83)			
Identify IUD and implant as limiting methods					
Yes	30%(214)	58%(415)	3.44 (1.83 -6.46)	4.69(2.3-10.8)	0.0001
No	1%(9)	11%(82)			
Identify IUD and implant as spacing methods					
Yes	18%(129)	14%(104)	2.86 (2.31 -3.56)	5.18(3.6 -7.4)	0.0001
No	13%(94)	55%(393)			
Know that implant can last 3-5 years					
Yes	20%(146)	46%(329)	0.98 (0.78 -1.23)	0.9 (0.7 -1.4)	0.8492
No	11%(77)	23%(168)			
Know that IUDs can last 3-5 years					
Yes	28%(199)	54%(389)	1.86 (1.27 – 2.71)	2.30 (1.4 -3.9)	0.0004
No	3%(24)	15%(108)			
They believe that IUD is:					
Easy to use					
Positive	22%(157)	29%(207)	2.33 (1.82 -2.98)	3.33 (2.4 – 4.8)	0.0001
Negative	9%(66)	40%(290)			
Easy to get					
Positive	24%(171)	40%(290)	1.85(1.41 – 2.42)	2.35 (1.6 – 3.4)	0.0001
Negative	7%(52)	29%(207)			
Effective					
Positive	22%(159)	39%(281)	1.58 (1.23 – 2.03)	1.91 (1.3-2.7)	0.0002
Negative	95(64)	30%(216)			
Less side effect					
Positive	22%(158)	31%(222)	2.17 (1.69 -2.79)	3.01 (2.1 -4.3)	0.0001
Negative	9%(65)	38%(275)			
Long-lasting					
Positive	14%(98)	24%(170)	1.32 (1.06- 1.64)	1.51 (1.1- 2.1)	0.0124
Negative	17%(125)	45%(327)			

DOI: 10.32668/jitek.v10i1.864

Variables	Modern Contraceptive		Crude PR (95%CI)	Crude OR (95%CI)	p-value
	LARC	Non-LARC			
	%(n)	%(n)			
They believe that implant is:					
Easy to use					
Positive	15%(109)	33%(234)	1.05 (0.84 – 1.30)	1.07(0.8 -1.5)	0.6554
Negative	16%(114)	37%(263)			
Easy to get					
Positive	16%(116)	38%(271)	0.93 (0.75 – 1.16)	0.9(0.7- 1.3)	0.5324
Negative	15%(107)	31%(226)			
Effective					
Positive	10%(72)	23%(169)	0.94 (0.75 – 1.19)	0.9(0.7- 1.3)	0.6517
Negative	21%(151)	46%(328)			
Less side effect					
Positive	15%(109)	28%(200)	1.27 (1.02 – 1.58)	1.4(1 – 1.9)	0.0304
Negative	16%(114)	41%(297)			
Long-lasting					
Positive	12%(85)	31%(221)	0.83 (0.66 – 1.04)	0.8(0.5 – 1.1)	0.11
Negative	19%(138)	38%(276)			
Social Support reported that the provider recommended LARC.					
Yes	122	249	1.14 (0.91 – 1.41)	1.2(0.9 – 1.7)	0.2527
No	101	248			
Interpersonal discussion discussed with spouse about FP.					
Yes	19%(140)	36%(258)	1.36 (1.08 – 1.71)	1.6(1.1 -2.2)	0.0067
No	12%(83)	33%(239)			

Most Ideation factors have significant association (p-value < 0.05) with LARC practice. The knowledge of LARC that can be used as spacing methods was the strongest ideation factors with OR = 5.18 (95% CI :3.62 -7.41; p-value = 0.0001). The most common reasons for not selecting LARC procedures were the need for a client-controlled method and the desire to conceive soon. As a health care practitioner is one of the most critical individuals in achieving the goal, it is necessary to enhance their knowledge and proficiency in LARC techniques. Strengthening provider capacity will expand women's access to various contraceptive methods and allow them to make informed decisions, particularly for those with limited awareness of LARC techniques (Tibaijuka *et al.*, 2017; Titaley *et al.*, 2017).

DOI: 10.32668/jitek.v10i1.864

In contrast to the recall of implants that are not significantly associated with the use of LARC, knowledge of IUD recall is significantly associated with the use of it. The logistic regression analysis was performed to identify the most dominant ideation factors associated with LARC practice. The knowledge of LARC that can be used for spacing was the strongest ideation variable with AOR= 4.55 (95% CI: 3.13 -6.61; p-value= 0.000); knowledge followed on from it can be used for limiting with AOR = 3.46 (95% CI 1.61 - 7.45; p-value= 0.001). The study confirmed the correlation between ideation factors on LARC and its use (table 3). The study did not confirm the correlation between items' social support and interpersonal discussion (table 4).

Table 4. Logistic Regression of Ideation Factors And LARC

Variables	AOR (95% CI)	p-value*
Age of mother	1.46(1.20 - 1.76)	<0.001
Knowledge		
Identify IUD and implant as limiting methods	3.46 (1.61 -7.45)	0.001
Identify IUD and implant as spacing methods	4.55 (3.13 -6.61)	<0.00
Believe that IUD		
are easy to use	2.17(1.46 - 3.23)	<0.00
have less side effects	2.01(1.35 - 2.99)	0.001
Believe that implants are long-lasting	0.66(0.45 -0.95)	0.027
Interpersonal discussion discussed with spouse about FP	1.51 (1.04 -2.20)	0.030

*Significant if p-value < 0.005

The results of this study differ from the numerous studies which have found the effects of social influence on contraceptive use decisions, including spousal approval of contraception and discussion of family planning with others (Gayen & Raeside, 2010). The previous study suggests that mass media and social networks play crucial roles in disseminating contraceptive knowledge on how women translate their knowledge into behavior, i.e., contraceptive awareness decreases fertility regardless of the fertility metric utilized, lifetime fertility, or probability of giving birth (Cheng, 2011). The interpersonal discussion factor is one of the ideation items significantly related to using LARC. This shows the importance of the husband's support program for the use of the LARC, as found in the previous study in Indonesia (Paskaria, 2015).

DOI: 10.32668/jitek.v10i1.864

Although a broad target group was included in this study, only two of four districts in Jakarta were covered. Hence, some characteristics of the respondents that may explain contraceptive behavior were unavailable in this study. However, this study has some limitations. Although a broad target group was included in this study, only two of four districts in Jakarta were covered. So that this may make this data cannot be generalized to the entire province of DKI Jakarta. Hence, some respondents' characteristics that may explain contraceptive behavior were unavailable in this study.

CONCLUSION

The data revealed four dimensions of contraceptive Ideation in both districts in Jakarta: knowledge, attitude, social interaction, and interpersonal discussion. This study found the number of family planning clients who used LARC was 223 (30%). Of the percentage of using LARC attributed to each ideational score, the highest was 58% on 16, and the lowest was 0% on 2-3. The knowledge of LARC that can be used for spacing was the strongest ideation variable with Adjusted Odds Ratio (AOR) = 4.55 (95% CI = 3.13 -6.61; p-value =0.000); followed by limiting with AOR 3.46 (95% CI 1.61 - 7.45; p-value= 0.001). The study confirmed the correlation between ideation factors on LARC and its use. To increase the number of LARC users, we should improve the supply side program by increasing FP clients' knowledge about LARC and shifting attitudes on LARC into positives. The government of district Jakarta should thus prioritize the demand side program, which is essential for communication strategies with FP clients.

ACKNOWLEDGEMENT

We acknowledge the support from the Center for Health Policy and Management Faculty of the Medicine Universitas Gadjah Mada. They permitted us to use the dataset for further analysis of this manuscript.

REFERENCES

Ali, M. M. and Cleland, J. (2010) 'Contraceptive Switching after Method-related Discontinuation: Levels and Differentials', *Studies in Family Planning*, 41(2), pp. 129–133. doi: 10.1111/j.1728-4465.2010.00234.x.

Anguzu, R. *et al.* (2014) 'Knowledge and attitudes towards use of long acting reversible contraceptives among women of reproductive age in Lubaga division, Kampala district, Uganda.', *BMC research notes*. BMC Research Notes, 7(1), p. 153. doi: 10.1186/1756-0500-7-153.

Anjum, S., Durgawale, P. M. and Shinde, M. (2014) 'Knowledge of Contraceptives Methods and Appraisal of Health Education among Married

Woman', *International Journal of Science and Research (IJSR)*, 3(3), pp. 584–590.

Babalola, S. *et al.* (2019) 'Ideation and Intention to Use Contraceptives in Kenya and Nigeria', *Demographic Research*, July(12), pp. 1–21. doi: 10.4054/DemRes.2015.33.8.Ideation.

Bongaarts, J. (2005) 'The Causes of Stalling Fertility Transitions'.

BPS;BKKBN;Kemenkes; MEASURE DHS (2012) *Indonesian Demography Health Survey 2012*. Jakarta.

BPS (2017) 'Indonesian Demographic and Health Survey 2017', p. 48.

Bulato, Rodolfo; Casterline, J. B. (2001) *Global Fertility Transition*. New York: Population Council.

Cheng, K. W. (2011) 'The Effect of Contraceptive Knowledge on Fertility: The Roles of Mass Media and Social Networks', *Journal of Family and Economic Issues*, 32(2), pp. 257–267. doi: 10.1007/s10834-011-9248-1.

Colleran, H. and Mace, R. (2019) 'Social network and community level in influences on contraceptive use: evidence from rural Poland', in *Biological Sciences*. The Royal Society Publishing, pp. 1–9.

Ezebialu, I. and Eke, A. (2013) 'Knowledge and practice of emergency contraception among female undergraduates in South eastern Nigeria.', *Annals Of Medical And Health Sciences Research*, 3(3), pp. 541–545. doi: 10.4103/2141-9248.122092.

Gayatri, M. (2020) 'The Utilization of Long-Acting Reversible Contraception and Associated Factors Among Women in Indonesia', *Global Journal of Health Science*, 12(3), p. 110. doi: 10.5539/gjhs.v12n3p110.

Gayen, K. and Raeside, R. (2010) 'Social networks and contraception practice of women in rural Bangladesh', *Social Science and Medicine*. Elsevier Ltd, 71(9), pp. 1584–1592. doi: 10.1016/j.socscimed.2010.08.002.

Hindin, M. J., McGough, L. J. and Adanu, R. M. (2014) 'Misperceptions, misinformation and myths about modern contraceptive use in Ghana.', *The journal of family planning and reproductive health care*, 40, pp. 30–35. doi: 10.1136/jfprhc-2012-100464.

Kakaiya, R., Lopez, L. L. and Nelson, A. L. (2017) 'Women ' s perceptions of contraceptive efficacy and safety', *Contraception and Reproductive Medicine*. Contraception and Reproductive Medicine, 2(19), pp. 4–9. doi: 10.1186/s40834-017-0046-5.

Kincaid, D. L. (2000) *Mass Media, Ideation, and Behavior: A Longitudinal Analysis of Contraceptive Change in the Philippines, Communication Research*. doi: 10.1177/009365000027006003.

Kincaid, D. L. (2004) 'From innovation to social norm: bounded normative influence', *Journal of health communication*, 9 Suppl 1(January 2015), pp. 37–57. doi: 10.1080/10810730490271511.

Kramer, K. L. *et al.* (2021) 'Effects of family planning on fertility behaviour across the demographic transition', *Scientific Reports*. Nature Publishing Group UK, 11(1), pp. 1–12. doi: 10.1038/s41598-021-86180-8.

Lilestina, S. N. (2011) *Determinant LAPM in Six Districts in Indonesia*. Jakarta.

Luis Bahamondes *et al.* (2020) 'Long-acting reversible contraceptive (LARCs) methods', *Best Practice & Research Clinical Obstetrics & Gynaecology*, 66(July), pp. 28–40.

Mansor, M. *et al.* (2015) 'Original Article the Prevalence of Family Planning Practice and Associated Factors Among Women in Serdang , Selangor', *Malaysian Journal of Public Health Medicine*, 15(3), pp. 147–156.

Paskaria, C. (2015) 'Non Medical Factors That Affect Usage of Long Acting Reversible Contraceptive (Larc) in Women After Childbirth in Indonesia', *Journal Of Medicine & Health*, 1(2), pp. 170–179. doi: 10.28932/jmh.v1i2.511.

PPKUI (2013) *Operational Research on Family Planning Advocacy to Improve Contraceptive Method Mix (ICMM) in East Java and West Nusa Tenggara Provinces*. Jakarta.

President (2020) *President Republic Indonesia Decree No 18/2020 National Mid-Term Development Plan 2020-2024*.

Storey, J. D. (2009) 'The Influence of Changes in Fertility Related Norms on Contraceptive Use in Egypt, 1995–2005', *Population Review*, 48(1), pp. 1–19. doi: 10.1353/prv.0.0017.

Tibaijuka, L. *et al.* (2017) 'Factors influencing use of long-acting versus short-acting contraceptive methods among reproductive-age women in a resource-limited setting', *BMC Women's Health*. BMC Women's Health, 17(25), pp. 1–13. doi: 10.1186/s12905-017-0382-2.

Titaley, C. R. *et al.* (2017) 'Poor Knowledge and Nonuse of Long-Acting / Permanent Methods of Contraceptives in Six Districts in Indonesia', *Asia Pacific Journal of Publilc Health*, 29(8), pp. 660–672. doi: 10.1177/1010539517738277.

DOI: 10.32668/jitek.v10i1.864