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Reasons of Refusal to Long Acting Reversible Contraception (LARC) on Reproductive Age Women: a Scoping Review

Biancha Andardi, Ditia G. S. P. Rahim, Anhari Achadi

Hospital Administration Study Program, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
Email: bianchaandardi@yahoo.com
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Abstract: Contraception is essential in reproductive health service. Through proper contraception, various risks related to pregnancy and birth can be avoided. Long acting reversible contraception (LARC) is deemed as the most efficient contraceptive metod. However, it faces significant refusal among women worldwide. This study aimed to determine the reasons of LARC refusal among reproductive age women. A scoping review was done using a guideline from *Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews* (PRISMA-ScR) on studies performed on Asian developing countries. The results showed that a total of seven articles were analyzed. The most common reason for LARC refusal was the disagreement of husband or other family members. Prior knowledge of LARC might increase the acceptance of LARC. In conclusion, since the most common reason for LARC refusal was the disagreement of husband or other family members, education of LARC method on pregnant women, their spouses, and their families is essential to reduce that rate of LARC refusal.
Keywords: contraception; long acting reversible contraception; refusal

INTRODUCTION

Contraception is one of the most important efforts in ensuring the best quality of reproductive health services. Following appropriate application of contraceptive method, risky pregnancies and deliveries, such as pregnancy at young or old age can be reduced.[1] These populations are also the largest contributor to maternal deaths due to postpartum hemorrhage and unsafe abortions done by non-medical practitioners.[1] Increasing the coverage of contraception in the female population of productive age may minimize both maternal and perinatal morbidity and mortality.[2,3]

Long-term contraceptive methods (LARC), including reversible methods in the form of implants and intrauterine devices (IUD) are the methods of preventing pregnancy with the highest success rate compared to other methods, namely more than 95%.[4] Unfortunately, only 13.2% of women of childbearing age in Indonesia use LARC.[4,5] This figure is much lower compared to short-term contraception, namely combined pill and injectable contraception, which accounts for more than 40% of all contraception used by women in Indonesia.[4]

Similar to conditions in India and other developing Asian countries, the minimal use of long-term contraception is a health problem experienced by many people. A study in India found that only 9.1% of women were willing to use the IUD after delivery.[6] This phenomenon is due to various multi-sectoral problems, namely low education, lack of information, even counseling, and the participation of husbands and parents.[6,7] Interestingly, the use of long acting reversible contraception among women in developed countries is much higher. Sweden, for example, has a total percentage of 72.1% women using contraception, 24.3% of whom use LARC.[8]

This condition is also similar to the conditions that occur in Indonesia. In order to improve the coverage of LARC at childbearing age woman in Indonesia, the research

team would like to find the reasons for LARC refusal, especially in Indonesia and Asian countries with similar cultural features to Indonesia.

METHODS

This was a scoping review study done in March 2022 to June 2022 aimed to determine the reasons of long acting reversible contraception (LARC) refusal in women of childbearing age. This scoping review was done in accordance to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews* (PRISMA-ScR).

This study used *population, concept, and context* (PCC) framework recommended by *Joanna Briggs Institute for Scoping Reviews*.[9] The framework of this study was stated in Table 1.

The literature search was done on five online databases, namely EBSCO, SciELO, Google Scholar, Pubmed, and *Portal Garuda*. Eligibility criteria for the study were, as follows: publications done in the form of original research, systematic review, or literature review; published in the last 5 years (2018–2022); not an experts' opinion or correspondence study; written in English or Indonesian; complete article could be fully accessed; and no duplication of study. The literature search for this study was done with the keywords shown in Table 2.

Table 1. Research Study PCC Framework

Population	**Childbearing age women**
Concept	LARC
	Long-acting reversible contraception
Context	Published in 2018 – 2022
	Study setting: developing Asian countries

Table 2. Keywords and database used in the study

No	Database	Keywords
1	Pubmed	((("long acting reversible contraception"[All Fields] OR ((("contracept"[All Fields] OR "contracepted"[All Fields] OR "contracepting"[All Fields] OR "contraception"[MeSH Terms] OR "contraception"[All Fields] OR "contraceptions"[All Fields] OR "contraceptive agents"[Pharmacological Action] OR "contraceptive agents"[MeSH Terms] OR ("contraceptive"[All Fields] AND "agents"[All Fields]) OR "contraceptive agents"[All Fields] OR "contraceptives"[All Fields] OR "contraceptive devices"[MeSH Terms] OR ("contraceptive"[All Fields] AND "devices"[All Fields]) OR "contraceptive devices"[All Fields] OR "contraceptive"[All Fields] OR "contraceptive s"[All Fields] OR "contraceptively"[All Fields]) AND ("embryo implantation"[MeSH Terms] OR ("embryo"[All Fields] AND "implantation"[All Fields]) OR "embryo implantation"[All Fields] OR "implantation"[All Fields] OR "implant"[All Fields] OR "implant s"[All Fields] OR "implantability"[All Fields] OR "implantable"[All Fields] OR "implantables"[All Fields] OR "implantate"[All Fields] OR "implantated"[All Fields] OR "implantates"[All Fields] OR "implantations"[All Fields] OR "implanted"[All Fields] OR "implanter"[All Fields] OR "implanters"[All Fields] OR "implanting"[All Fields] OR "implantion"[All Fields] OR "implantitis"[All Fields] OR "implants"[All Fields])) OR "intrauterine device"[All Fields] OR "IUD"[All Fields]) AND ("refusal"[All Fields] OR "rejection"[All Fields])) AND (2018:2022[pdat])

No	Database	Keywords
2	EBSCO	TI (("long acting reversible contraception" OR "contraceptive implants" OR "IUD" OR "intrauterine device")) AND TI (("refusal" OR "rejection")) AND TI (Asia)
3	Portal Garuda	("metode kontrasepsi jangka panjang" OR "MKJP" OR "IUD" OR "implan") AND ("penolakan") AND ("Asia")
4	SciELO	(ti:("long acting reversible contraception" OR "contraceptive implants" OR "IUD" OR "intrauterine device"))) OR (ab:("long acting reversible contraception" OR "contraceptive implants" OR "IUD" OR "intrauterine device"))) AND (ti:(("refusal" OR "rejection")))
5	Google Scholar	(("long acting reversible contraception" OR "contraceptive implants" OR "IUD" OR "intrauterine device") AND ("refusal" OR "rejection") AND "Asia")

Study selection was carried out by the first and second authors using the appropriate eligibility criteria. The initial analysis was carried out by assessing the title and abstract of the study. Then, both of the authors proceeded with reading the complete article obtained. Next, the first author checked to make sure the article was in accordance with the research objectives. If the appropriate articles had been obtained, data collection was carried out in tabular form and data extraction was carried out by including the author's name, year of publication, title and research location, type of research, design, and research results.

RESULTS

After the literature search process was carried out, 715 articles were obtained using the keywords. However, after the duplicate assessment, only 696 different articles were obtained. Next, the title and abstract of the studies were screened. A total of 689 studies were excluded due to inappropriateness of topic, inappropriateness of research location, or other language. All articles related to the research topic were available in full-text form, so an analysis of seven studies was carried out. The study search diagram can be seen in Figure 1. Afterward, studies fulfilling the criteria were analyzed. The analysis result can be found at Table 3.

DISCUSSION

Long-acting reversible contraception (LARC) is one of the most effective and efficient methods of preventing and planning pregnancy. The use of contraception has a direct impact on the rate of population growth, community welfare, and maternal and infant mortality rates.[10,11] However, in both developing and developed countries, there is a high level of LARC rejection. Based on the results of the studies that have been collected, there is a rejection range of 67.59%-93.7% for LARC, especially the installation of a post-partum IUD as one of the easiest and has the best coverage LARC worldwide.[7,12] Similar conditions are found in Indonesia, where national data states that LARC has only been carried out on 9.4% of women of childbearing age, or 21.05% of all women who use contraception.[4]

Research by Syahidah et al[5] (2019) in Indonesia showed that only 21.05% of women of childbearing age used LARC of all women who used contraception. This figure is similar to studies in other countries, such as the study of Ghafoor et al[12] (2020) in Pakistan which showed 12.96% of subjects received post-partum IUD, studies of Subedi et al[7] (2020) in Nepal which showed postpartum IUD acceptance of 6.3%, Nigam et al[13] (2018) in India which showed postpartum IUD insertion of 9.1%, and MacQuarrie and Aziz[14] (2022) in Pakistan which showed 3,3% of women of child-bearing age used IUD. These studies show that the use of LARC is still rare in Indonesia and other Asian countries.

Clinicians often suspect that a pregnant woman's fear of various complications that occur after the insertion of LARC is the most influential factor in the acceptance or rejection of the LARC user. However, previous studies have shown that the decision of a pregnant mother is not the main determining

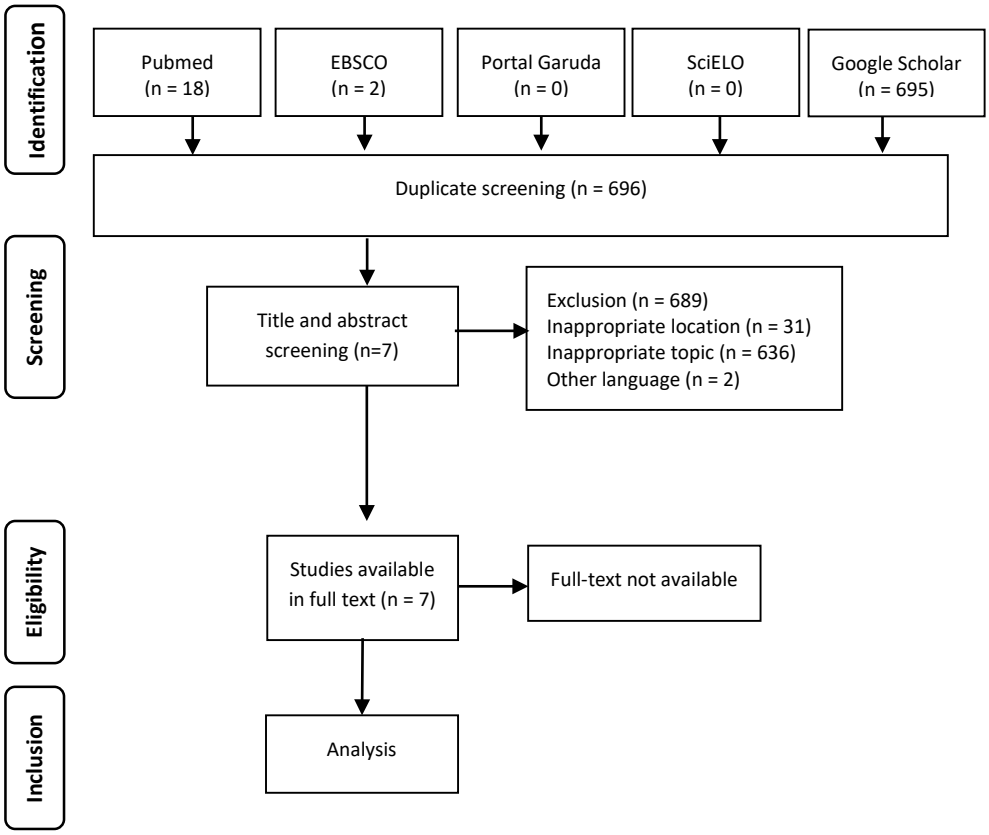

Figure 1. Study search flowchart

factor in refusing or using LARC such as the postpartum IUD, but the decisions of the husband and even of the in-laws are the most important ones. In addition, religious reasons are also known to only play a small role in determining the rejection of the LARC.[6,7] However, the studies are limited to Moslem and Hindi religions, whereas studies regarding the use of LARC among different religions are very limited.

Previous studies have shown that the reasons for refusing or discontinuing the use of LARC in various countries in Asia can be divided into internal and external reasons. Yu et al[1] (2021) in Myanmar showed that refusal due to internal factors most commonly was due to fear of side effects. In a study done by Kumar et al[15] (2019), the most common reason for discontinuing the use of LARC among users was the presence of side effects. Meanwhile, external factors that are known to influence the use and rejection of LARC are opinions from husbands and families. Research by Ghafoor et al[12] (2020) in Pakistan, Subedi et al[7] (2020) in Nepal and Nigam et al[13] (2018) showed that the absence of husband and family consent is the most important factor in LARC refusal.

Previous studies have shown that education is important in accepting or rejecting the use of LARC.[12] However, it is not only the knowledge of pregnant women that is important in determining the use of LARC, but also the knowledge of husbands and other family members who are considered influential. Research by Subedi et al[7] (2020) showed that refusal from the husband and family played a more important role than the prospective acceptor factor itself. Although there was a relationship between maternal educational level and the use of LARC, it was also heavily influenced by the educational level of the husband. This phenomenon encourages health care facilities to include husbands or other family members in the patient education process in order to reduce the level of LARC rejection due to family factors. This is also more important especially in patients who have

never given birth before and are still confused about the process of pregnancy and childbirth.[7]

Contraception counseling timing also affects the acceptance of the use of LARC. In the use of the postpartum IUD as LARC, it was found that 80.7% of pregnant women only received education at the beginning of the labor process.[7] In a previous qualitative study, it was found that women experienced pressure to choose a postpartum IUD after giving birth. In addition, it was stated that women prefer accurate information available from the antenatal period to give them more time to ask questions and think about decisions to be made.[16] The educational process in early labor is a less than optimal choice in convincing the mother and husband or other family members to choose the right contraceptive method.

CONCLUSION

The use of long-acting reversible contraception (LARC) in the population of women of childbearing age in Indonesia and Asia is still not widely practiced and accepted. Meanwhile, the use of LARC in Indonesia is higher than other developing Asian countries, but lower than developed countries.

The reasons for refusing LARC are divided into internal factors and external factors. Most of the studies showed that the internal factors that influence the rejection of LARC are the presence of side effects and lack of familiarity with the method. Meanwhile, the external factors of LARC rejection are mainly based on rejection factors from husbands and other families. Education for pregnant women, husbands, and families during the pregnancy process is important in increasing LARC coverage in the community.

Conflict of Interests

There was no conflict of interest to be declared.

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Table 3. Study analysis results

No	Author	Country	Title	Aim	Design	Results
1	Ghafoor et al, 2020[12]	Pakistan	Incidence of acceptance and reasons of refusal of PPIUCD in a tertiary care hospital	Assessing acceptance and reasons for rejection of post-partum IUD insertion	A cross-sectional study in one hospital of patients who delivered vaginally or abdominally.	A total of 12.96% received a postpartum IUD, 67.59% refused, and 19.44% asked for time to discuss with the family. Factors that influence postpartum IUD acceptance is prior knowledge. The most common cause of refusal is the absence of husband or family approval (29.7%), followed by wanting another, more permanent method (24%). The most rejection occurred in nulliparas (64.28%) and primiparas (62.5%). Only 2.8% of rejections occurred due to religious reasons.
2	Subedi et al, 2020[7]	Nepal	Acceptability and complications of postpartum intrauterine device insertion in tertiary care hospital in Eastern Nepal	Assessing women's acceptance of post-partum IUD insertion and assessing the characteristics influencing	A cross-sectional study in one hospital of patients who delivered vaginally or abdominally.	Acceptance of postpartum IUD is only 6.3%. The cause of the refusal was distrust of the postpartum IUD method and the refusal from the husband. As many as 80.7% of the subjects received counseling at the beginning of the labor process. A total of 3.8% of subjects removed the IUD postpartum for psychosocial reasons after the occurrence of pelvic pain and vaginal bleeding.
3	Nigam et al, 2018[13]	India	Postpartum intrauterine device refusal in Delhi: reasons analyzed	Identifying women's knowledge and behavior towards postpartum IUD insertion and assess the reasons for refusal	A cross-sectional study at one hospital on patients who delivered vaginally or abdominally and had no contraindications for the insertion of a postpartum IUD.	Postpartum IUD insertion was performed in 9.1% of women who gave birth. Only 48.4% of women knew the IUD method of contraception and only 21.9% of them knew the postpartum method of insertion. The most common causes of IUD rejection were fear of malignancy (38%), fear of vaginal bleeding (36.4%), infertility (3.6%), and pain (0.6%). External factors in the form of opinions of husband and in-laws are important in decision-making on the use of the postpartum IUD. As many as 59% of rejections came from husbands or in-laws, higher than 41% rejections from patients Only 8.4% of subjects refused the postpartum IUD for religious reasons.
4	Syahidah et al, 2019[5]	Indonesia	The determinant of the status of using long-term contraception	Assessing the determinants of the use of MKJP originating from the women and husbands	Cross-sectional study of secondary data on women of childbearing age in Indonesia	About 21.05% of childbearing age women used LARC Younger women tend to refuse to use LARC The location of residence is one of the determinants of the use of LARC in Indonesia Refusal to use LARC is less common in women with a higher age,

			method in Indonesia in 2017			more children, older husbands, higher education, and better socioeconomic levels.
5	MacQuarrie, Aziz, 2022[14]	Pakistan	Women's decision-making and contraceptive use in Pakistan: an analysis of demographic and health survey data	Assessing patterns of use of modern contraception and influencing factors	Cross-sectional study of secondary data on women of childbearing age in Pakistan	A total of 27.9% of women of childbearing age who used modern contraception, with the use of IUD as much as 3.3% of the total women of childbearing age IUD refusal is less common in the population of working women and couples with better socioeconomic conditions. In Pakistani population, the decision to use and refuse contraception is more influenced by husband's opinion.
6	Kumar et al, 2019[15]	India	One-year continuation of postpartum intrauterine contraceptive device: findings from a retrospective cohort study in India	Assess the cause of refusal or discontinuation of the use of MKJP after one year.	Single-arm cohort study in 12 hospitals of women receiving a postpartum IUD	A total of 37.2% of women refused to continue the use of the IUD for more than 1 year. A total of 7.5% of women experienced IUD expulsion, 19.3% stopped using the IUD due to side effects, and 10.4% discontinued the IUD for other reasons.
7	Yu et al, 2021[1]	Myanmar	Postpartum women's knowledge and planned use of contraception in Myanmar	Assessing contraceptive use in women who have just given birth and contraception use plans, including LARC	Cross-sectional study in two hospitals of patients who had just given birth	Knowledge of LARC was mentioned spontaneously in 62.8% (implants) and 57.3% (IUDs). Only 0.3% of subjects had ever used implants and 0.5% had used an IUD. Only 3.1% of subjects wanted to use an IUD and 16.1% wanted to use an implant as contraception in the future. The reasons for refusing to use implants were fear of side effects (64.5%), not being familiar with the method (13.1%), and not liking the method (8.3%). Other reasons (cost, no time) were found in only 6.9% of subjects. The reasons for refusing to use the IUD were fear of side effects (62.5%) and unfamiliarity with the method (11.1%).