

The Connection between Individuals' Knowledge Levels and Their Interest in Using IUD Contraceptive Devices

Musliani¹, Rosyidah Alfitri^{2,*}, Rani Safitri³

¹ Program Studi Sarjana Kebidanan, Fakultas Ilmu Kesehatan, Institut Teknologi Sains dan Kesehatan RS dr. Soepraoen, Malang, Indonesia

²⁻³ Fakultas Ilmu Kesehatan, Institut Teknologi Sains dan Kesehatan RS dr. Soepraoen, Malang, Indonesia; e-mail : rosyidahalfitri@itsk-soepraoen.ac.id

* Corresponding Author : Rosyidah Alfitri

Abstract: Population policy in Indonesia represents a key government effort to regulate and control population growth. One of the most significant strategies in managing population growth is Family Planning, which helps reduce the rate of fertility and support healthier families. Among the various contraceptive methods, the IUD (Intrauterine Device) is a non-hormonal option that is commonly used by Fertile Age Couples (FACs). The goal of this study was to explore the relationship between the level of knowledge and the interest in the IUD contraceptive method among couples in the Puskesmas Pugaan area. This research employed an analytical approach using a cross-sectional design. The population for this study included all fertile couples in the Pugaan Health Center area. A purposive sampling technique was applied, selecting a sample of 20 participants. Data were collected through questionnaires, and the data were analyzed using the chi-square test with the SPSS version 25 software. The study found that 12 participants (60%) had good knowledge of IUDs, 5 participants (25%) had sufficient knowledge, and 3 participants (15%) had poor knowledge. Regarding interest in using IUDs, 16 participants (80%) expressed an interest, while 4 participants (20%) were not interested in using the IUD. The chi-square statistical test yielded a P value of 0.000 ($P < 0.05$), indicating a statistically significant relationship between knowledge level and interest in the IUD contraceptive method. In conclusion, this study demonstrates that there is a significant relationship between the level of knowledge and the interest in using IUD contraception at Puskesmas Pugaan. These findings suggest that improving the knowledge of couples about contraceptive methods like the IUD may play a crucial role in increasing interest and usage rates, contributing to more effective population control efforts.

Keywords: Contraception; IUD; Knowledge

1. Introduction

Population policy in Indonesia is one form of government effort that aims to regulate and control population growth. Population policy in Indonesia is implemented by influencing three main variables of population problems, namely births, deaths and migration. The government has implemented several population policies such as implementing a family planning program (Asi et al., 2023). The Family Planning (KB) program not only aims to control the rate of population growth, but also to meet the public's demand for quality KB and Reproductive Health (KR) services, reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) and overcome reproductive health problems to form small, quality families through a KB program using contraceptives, one of which is the IUD (Aisyah, 2018).

The UN estimates that in 2022, the prevalence of contraceptive use by married women is projected to be 62.2%. The percentage continues to rise to reach 64.4% in 2030. Meanwhile, modern contraception such as sterilization, pills, spirals/IUDs, birth control injections, birth control implants, condoms, and the lactational amenorrhea method (LAM) are more widely

Received: 17, May 2025

Revised: 31, May 2025

Accepted: 16, June 2025

Published: 30, June 2025

Curr. Ver.: 30, June 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

([https://creativecommons.org/li](https://creativecommons.org/licenses/by-sa/4.0/)

[censes/by-sa/4.0/](https://creativecommons.org/licenses/by-sa/4.0/))

chosen by married women in Indonesia. The prevalence of modern contraceptive use is projected to be 59.7% in 2022. The figure continues to grow to reach 61.9% in 2030 (KOMNAS perempuan, 2023). According to Worldometers data in March 2020, the population of Indonesia was 273,523,615 people with a population density of 151 people per km², this number tends to increase compared to 2019, which was 270,625,568 people (Satria, 2022). The Central Statistics Agency of East Java Province reported that of the 5,967,082 fertile couples, 340,045 used intrauterine contraceptives or IUDs, 185,657 used the female surgical method or MOW, and 8,318 used the male surgical method or MOP (Badan Pusat Statistik Provinsi Jawa Timur, 2023).

The decline in population numbers was influenced by creating family planning and direct initiatives in the field of population management. Strategic initiatives in an effort to promote safe motherhood are organized on four pillars: Family Planning Pregnancy Care, Childbirth, and Essential Obstetric Services (Kemenkes RI, 2019). Effective efforts to reduce maternal and child mortality rates are by controlling the community with family planning because it can help couples from high-risk pregnancies by preventing/delaying pregnancy, in order to space out pregnancies and the main target is fertile couples (Octavi et al., 2022)

IUD is a contraceptive device that has a high effectiveness of 98% to 100%, its use is practical because with one installation, it has no hormonal side effects, the installation period is relatively long between 3 to 10 years, it does not interfere with sexual intercourse, does not affect the quality and volume of breast milk, and can be installed immediately after giving birth or after an abortion (Niken, 2018). In addition, this IUD does not interfere with breastfeeding, and also the regularity of menstruation so it can be said that the use of IUD contraceptives is very effective (Saifuddin, 2019)

Although the IUD contraceptive is effective, the use of IUD is still low. This is because there are several factors that influence Sociodemographic factors consisting of age, education, knowledge, parity, tribe, ethnicity and religion, socio-psychological factors consisting of demographic size, value of boys, attitudes, anxiety, perception, culture and husband's support while health service factors consisting of IEC, support from health workers, sources of contraception, distance and media exposure (Purba, 2019) Based on research from Rosyidah 2021, the pandemic is a factor in family planning acceptors postponing or not visiting health facilities (11) .

Knowledge is everything that is known. We can know because of the experience we have. In addition, knowing from others. Knowledge can be in the form of facts or things that are designed from the person's own experience. Thus, knowledge is something that has been understood and concluded which is formed from something that people recognize. According to research conducted by Fitriana Astuti (Astuti et al., 2024) there is a relationship between knowledge and the use of Intra Uterine Device (IUD) contraception in KB Acceptors at Panacea Clinic Balikpapan with a p value of 0.000. Therefore, researchers want

to know more deeply whether there is a relationship between the level of knowledge and interest in IUD contraception at Puskesmas Pugaan .

2. Research Methods

The method used in this research is analytical through a cross-sectional approach . The population is all fertile couples in the Pugaan Health Center area. Samples were taken using a purposive sampling technique of 20 people. Data collection using a questionnaire. Data analysis using chi square with the help of the SPSS V.25 application .

3. Results and Discussion

Table 1. Frequency Distribution Respondents by Age

Age	Frequency	Percentage (%)
21-28 years	8	40
29-36 years	7	35
37-44 years	5	25
Total	20	100

According to table 1. frequency distribution respondents based on age, of the 20 respondents, the majority of respondents were aged 21-28 years, 8 people (40%), respondents aged 29-36 years, 7 people (35%), respondents aged 37-44 years, 5 people (25%).

Table 2. Frequency Distribution Respondents Based on Education

Education	Frequency	Percentage (%)
ES	1	5
JHS	6	30
SHS	10	50
D3	1	5
S1	2	10
Total	20	100

According to table 2. frequency distribution respondents based on education, the majority of respondents have a high school education of 10 people (50%), respondents with a junior high school education of 6 people (30%), respondents with a bachelor's degree of 2 people (10%), respondents with a D3 education of 1 person (5%), and respondents with an elementary school education of 1 person (5%).

Table 3. Frequency Distribution Respondents by Occupation

Work	Frequency	Percentage (%)
housewife	9	45
Farmer	8	40
Honorary	1	5
Integrated Health Post Cadres	2	10
Total	20	100

According to table 3. frequency distribution respondents based on occupation, the majority of respondents with the job of housewife as many as 9 people (45%), respondents with the job of farmer as many as 8 people (40%), respondents with the job of Posyandu cadre as many as 2 people (10%), and respondents with the job of honorary as many as 1 person (5%).

Table 4. Frequency Distribution Respondents Based on Parity

Parity	Frequency	Percentage (%)
primipara	5	25
multipara	11	55
grandemultipara	4	20
Total	20	100

According to table 4. frequency distribution Respondents based on parity, the majority of respondents were multiparas as many as 11 people (55%), primiparas as many as 5 people (25%), and grandemultiparas as many as 4 people (20%).

Table 5. Crosstab of Knowledge Regarding Interest in IUD Contraceptive Devices

		interest		Total
		interested	not interested	
knowledge	Good	12	0	12
	Enough	3	2	5
	not enough	1	2	3
Total		16	4	20

According to table 5. Crosstab of knowledge on interest in IUD contraception, respondents with good knowledge are interested in IUD contraception as many as 12 people, respondents with sufficient knowledge with respondents interested in IUD contraception as many as 3 people and not interested in IUD contraception as many as 2 people, respondents with less knowledge with respondents interested in IUD contraception as many as 1 person and not interested in IUD contraception as many as 2 people.

Table 6. Results of the Chi Square Test on the Relationship between Knowledge Level and Interest in IUD Contraceptive Devices

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.333 ^a	2	.016
Likelihood Ratio	9,467	2	.009
Linear-by-Linear Association	7,830	1	.005
N of Valid Cases	20		

According to table 6, the results of the chi-square test on the relationship between the level of knowledge and interest in IUD contraception show that the results of the chi-square test show a P-value of 0.016 < 0.05, which means that there is a relationship between the level of knowledge and interest in IUD contraception at the Pugaan Health Center.

From this study, it was obtained that from 20 samples, respondents who had good knowledge were 12 people (60%), sufficient knowledge were 5 people (25%), and good knowledge were 3 people (15%). Those who were interested in using IUD contraception were 16 people (80%) and those who were not interested were 4 people (20%).

IUD as a very effective and safe method of contraception. Studies show that IUD has a very low failure rate and can be used as emergency or regular contraception. The safety of IUD has also been proven in various studies, although there is a small risk associated with expulsion and perforation. (Suparman, 2021)

In table 1, the frequency distribution of respondents based on age, the majority of respondents were aged 21-28 years, as many as 8 people (40%), this means that in this study, most mothers who were interested in using IUD contraception were in the age range of 21-28 years. This is in line with research conducted by Mitha Destyowati (Destyowati, 2013) the mother's age between 20-30 years is the best age to conceive and give birth, then immediately after the first child is born, it is recommended to use an IUD as the main choice.

In table 2, frequency distribution based on education, the majority of respondents had a high school education of 10 people (50%). According to Jasni (Jasni et al., 2022) The high level of education of a person will also support the speed of acceptance of family planning information in fertile couples. This means that the higher the level of education, the broader the insight of a person and the easier it is to obtain and process the information received. The level of education is also one of the factors that influences a person's perception to more easily determine new ideas and technologies. So the use of IUD contraceptives which have a high level of effectiveness is very good to be used by someone who has a high level of education and knowledge (Oktarina, 2022).

In table 3 frequency distribution based on occupation, the majority of respondents are housewives as many as 9 people (45%). Housewives are usually often tired and have mood swings due to endless work at home, not to mention taking care of children, so hormonal birth control usually worsens their mood because of messy hormones, IUD is one of the birth control that is suitable for housewives because it does not contain hormones. Weak economic conditions due to the type of work held will affect purchasing power including the ability to buy contraceptives, so it can be seen that poor families generally have low incomes due to their type of work. This is in line with research conducted by Sucita Tripertiw, et al in 2019 which showed that employment status can affect the mother's interest in using IUD contraception so that it will indirectly affect the status of long-term contraceptive use (Tripertiw et al., 2019).

In table 4 frequency distribution based on parity, the majority of respondents are multiparas as many as 11 people (55%). Usually mothers who have more than 2 children will start to limit and regulate the number of their children, not only because it affects their psychology such as fatigue and stress, but also the costs incurred will certainly increase. This is in accordance with the theory that says that someone decides to follow a family planning program if they feel that the number of living children is sufficient for the desired number. This means that the number of living children affects a person's participation in the family planning program. The greater the number of living children a person has, the greater the possibility of limiting births. By looking at the number of children born alive, a positive relationship was also found, meaning that the older the age reflects the process of family change and can also show the process of fertility change over time (Hipson & Handayani, 2024)

The use of intrauterine contraceptive devices (IUDs) is one of the effective and safe methods of contraception. However, there are several factors that influence the adoption and use of IUDs among women. Research shows that the level of knowledge has a significant relationship with the use of IUDs (Syari'ah & Hamidah, 2024)

The level of knowledge about IUD greatly influences women's decisions to use this contraceptive method. Research shows that low knowledge about IUD can result in low interest and use of IUD. Adequate education from health workers can increase understanding and acceptance of IUD as a safe and effective contraceptive method (Entoh et al., 2021) Knowledge has a significant relationship with the use of contraceptives, the better a person's knowledge about contraception, the more rational they are in using contraceptives. (Arbaiyah, 2021)

4. Conclusions

From the results of the study obtained from 20 respondents studied at Pugaan Health Center, it can be concluded that the results of the frequency distribution of respondents who are interested in IUD contraception are more than those who are not interested in IUD contraception. The results of the frequency distribution of the age of 21-28 years are more, from the results of the frequency distribution of higher education more than low education. From the frequency distribution of parity, multipara is the highest compared to primipara and grandmultipara. From the frequency distribution based on occupation, the highest number of respondents is as a housewife. The results of the frequency distribution of good and sufficient knowledge are more than poor knowledge. There is a significant relationship between the level of knowledge and interest in IUD contraception at Pugaan Health Center with a P value of 0.000 ($P < 0.05$).

References

- Aisyah, A. (2018). The relationship between the use of injectable contraceptives and changes in the menstrual cycle in family planning acceptors at the Nurjaimah clinic, Gebang sub-district, Langkat district. *Jurnal Prioritas Nursing*, 1(1).
- Alfitri, R., & Yunita, A. (2021). Accuracy of injectable KB acceptor re-visit during the COVID-19 pandemic in PMB Yayuk Handayani Wagir District Malang Regency. *Placentum: Jurnal Ilmiah Kesehatan dan Aplikasinya*, 9(3), 59–64. <https://doi.org/10.20961/placentum.v9i3.54666>
- Arbaiyah, I. (2021). The relationship between husband's knowledge and support with the use of IUD contraception in Balakka Village in 2020. *J Kesebat Ilm Indones*, 6(2), 86–94. <https://doi.org/10.51933/health.v6i2.575>
- Asi, M., Kurniawan, F., Sutriningsih, & Irawati, E. (2023). *Family planning services* (1st ed.). In A. Asriati & F. Realita (Eds.), EUREKA MEDIA AKSARA.
- Astuti, F., Retnaningsih, R., & Indriati, I. (2024). Use of IUD contraception devices in family planning acceptors at Panacea Clinic Balikpapan. *J Kesebat Masy Inov*, 7, 1–5.
- Central Statistics Agency of East Java Province. (2023). *PUS active KB participants IUD, MOW, MOP*.
- Destyowati, M. (2013). The relationship between the level of mother's knowledge about IUD contraception and the interest in using IUD contraception in Harjobinangun Village, Grabak District, Purworejo Regency in 2011. *J Community Health*, 8.
- Entoh, C., Zulfitriani, Z., Longgupa, L. W., Sitorus, S. B. M., Nurfatimah, N., Ramadhan, et al. (2021). Do husband's knowledge and support affect the low use of IUD contraceptive methods among KB acceptors? *J Health Sciences*, 15(2), 189–195. <https://doi.org/10.33860/jik.v15i2.476>
- Hipson, M., & Handayani, S. (2024). Use of 3-month injection contraception based on introduction: Contraception comes from the word 'counter', which means to prevent or hinder, and 'conception', which means fertilization or the meeting between egg cells and sperm. *Jurnal Kesehatan*, 9, 384–394.

- Jasni, N., Nadeak, Y., & Manullang, R. (2022). Factors associated with low use of intrauterine contraceptive devices. *Institut Teknol Kesehatan dan Bisnis Graba Ananda [Internet]*, 6(1), 728–734. Available from <https://journal.universitaspahlawan.ac.id/index.php/prepotif/article/download/3426/2704>
- KOMNAS Women. (2023). *Realizing the rights of all women to choose and get access and services of contraceptive devices*.
- Ministry of Health of the Republic of Indonesia. (2019). *Family planning*.
- Niken, M. (2018). Breastfeeding plan and contraceptive selection in pregnant women in Yogyakarta. *Jurnal Kesehatan*, 2, 2–6.
- Octavi, F., Della, L., & Munir, R. (2022). Relationship between maternal knowledge level and interest in using intrauterine contraceptive devices (IUD) after delivery. *J Midwifery Care*, 2(02), 133–142. <https://doi.org/10.34305/jmc.v2i2.419>
- Oktarina, R. (2022). The relationship between education and mother's knowledge regarding the selection of IUD (intrauterine device) contraception. *Cendekia Med J Stikes Al-Ma'arif Baturaja*, 7(1), 26–33. <https://doi.org/10.52235/cendekiamedika.v7i1.104>
- Purba, L. (2019). *Science about family planning*.
- Saifuddin, A. (2019). *Practical guide to contraceptive services* (2nd ed.). EGC.
- Satria. (2022). Relationship between knowledge level, husband's support, and mother's attitude with the use of IUD contraception. *Jurnal Ilmiah Univ Batanghari Jambi*, 22(1), 166–170. <https://doi.org/10.33087/jiubj.v22i1.1772>
- Suparman, E. (2021). Emergency contraception and its problems. *Med Scope J*, 3(1), 94–104. <https://doi.org/10.35790/msj.v3i1.34908>
- Syari'ah, A., & Hamidah, T. (2024). Childfree and the law of using contraception in a contemporary fiqh perspective. *AL-AQWAL: J Kaji Huk Islam*, 3(2), 103–117. <https://doi.org/10.53491/alaqwal.v3i02.1252>
- Triptiwi, S., Mardiana, N., & Nurrachma, E. (2019). The relationship between mother's employment status and mother's interest in using IUD contraception at Bengkuring Samarinda Health Center in 2019. *Thesis of the East Kalimantan Ministry of Health Polytechnic*, 1–112.