



# The Relationship between Mother's Knowledge About IUDs and The Choice of Contraception in the Work Area Auxiliary Health Care Kamawen

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**Abstract.** Contraception is an action to prevent pregnancy, either temporarily or permanently. Intra Uterine Device (IUD) is a contraceptive method that is effective in delaying or preventing pregnancy and has the advantage of a long period of use. However, the number of IUD acceptors in the work area Auxiliary Health Care Kamawen is still low, so this research was conducted to see the relationship between maternal knowledge about IUDs and the choice of contraceptives in the work area Auxiliary Health Care Kamawen. This research used a quantitative approach with a cross sectional design, involving 40 respondents as samples, while the population was all family planning acceptors in the work area Auxiliary Health Care Kamawen of Kamawen Village. Data were analyzed using the Kendall's Tau-b correlation test. The results of the analysis show a correlation coefficient of 0.860 with a p-value of 0.000, which indicates a very strong and significant relationship between maternal knowledge and the choice of IUD contraception method. Thus, it can be concluded that the better the mother's understanding, the higher the likelihood that they will choose IUD contraception.

**Keywords:** Choice of Contraception; Family Planning; IUD; Knowledge; Maternal Health.

## 1. INTRODUCTION

According to data from the Ministry of Home Affairs (Kemendagri), the average population growth in Indonesia increased from 269.603 million people in 2020 to 273.87 million people in 2021. This shows an increase in population of 2.49 million people in 2021 (Darmayanti & Siregar, 2024).

One of the problems in Indonesia is the population growth rate which is still relatively high. This growth is shaped by natality and mortality levels, where improvements in health services reduce death rates, whereas natality levels stay elevated. This condition triggered a surge in population. Because of this, the government is trying to suppress population growth through implementing the family planning (KB) program (Salsabilla et al., 2018).

Contraception is an action to prevent or avoid fertilization, namely the process of the ovum meeting with sperm cells. The use of contraception is required by couples who are sexually active, do not experience fertility problems, but do not yet want to become pregnant (Handayani & Fitria, 2022).

In determining a contraceptive method, a woman needs to consider various aspects, such as her health condition, possible side effects, risk of unplanned pregnancy, number of children desired, relationship with her partner, and cultural norms regarding fertility. Therefore, Any decision regarding a contraceptive mode should be done rationally by paying attention to its effectiveness and efficiency (Santi et al., 2025).

The Ministry of Health of the Republic of Indonesia (Kemenkes RI) in 2021 stated that the implementation of the Family Planning (KB) program aims to improve community welfare. One of the recommended contraceptive methods is the Intra Uterine Device (IUD), which is a long-term method that is effective, can restore fertility (reversible), and can be used by all women of reproductive age (Yuniarti et al., 2025).

IUD contraception is a non-hormonal contraceptive which is very suitable for breastfeeding mothers because it does not affect the quantity or quality of breast milk, and allows fertility to return after the device is removed (Hatijar & Saleh, 2020). Compared to other methods such as injections, pills or implants, IUDs are more effective at spacing pregnancies and can prevent pregnancy for up to 10 years with a failure rate of around 1%. Another advantage of the IUD is that it only needs to be installed once for long-term use, the cost is relatively affordable, it is safe because it has no systemic effects, does not inhibit breast milk production, and fertility recovers quickly after removal (Patimah & Nurani, 2022).

Contraceptive use is influenced by several factors, including predisposing factors for instance individual knowledge and attitudes, supporting factors such as the availability of health facilities, as well as reinforcing factors such as information from family planning officers and partner support. The knowledge in question includes the mother's understanding of the use of contraception, especially its benefits in preventing pregnancy (Rahayu et al., 2018).

Knowledge is all information that a person has and is obtained through the process of sensing an object. Knowledge arises from the results of seeing, hearing, feeling and thinking, so that it becomes the basis for a person's behavior and actions. Basically, knowledge is memory or understanding of material that has previously been studied, seen or heard. The higher a mother's level of knowledge, the better her ability to choose contraceptives that are easy and practical to use (Oktarina, 2022). Knowledge is also an important factor in understanding and accepting change and adequate understanding of the various types of contraceptives helps individuals determine the most appropriate family planning options. In addition, a good understanding of contraceptive methods, including side effects, contraindications, and access to services, can make it easier for someone to overcome possible problems that arise during use. Correct knowledge about family planning methods will influence mothers' attitudes in choosing and using contraception (Lailaturohmah et al., 2022).

Based on this description, the author intends to conduct research on the relationship between maternal knowledge about IUDs and the choice of contraception in the work area Auxiliary Health Care Kamawen.

## 2. RESEARCH METHODS

This study employs a quantitative approach featuring a cross sectional design, where the variables of maternal knowledge and choice of IUD family planning method are measured simultaneously. The study population comprised all family planning acceptors located in the operational region of the Kamawen Auxiliary Health Care, yet the trial gathered 40 respondents who met various previously determined selection benchmarks. Data collection was carried out through a structured questionnaire which contained questions regarding respondent characteristics, level of knowledge, and contraceptive choices. The data obtained were analyzed using the Kendall's Tau-b statistical test because both variables are ordinal in nature and the sample size is relatively small.

## 3. RESULTS AND DISCUSSION

### Univariate Analysis

**Table 1.** Frequency Distribution Based on Maternal Age.

| Category     | Frequency | Percentage (%) | Valid Percentage (%) | Accumulative Percentage (%) |
|--------------|-----------|----------------|----------------------|-----------------------------|
| <20 Years    | 1         | 2.5            | 2.5                  | 2.5                         |
| 20-35 Years  | 38        | 95.0           | 95.0                 | 97.5                        |
| >35 Years    | 1         | 2.5            | 2.5                  | 100.0                       |
| <b>Total</b> | <b>40</b> | <b>100.0</b>   | <b>100.0</b>         |                             |

Table 1 shows that the majority of respondents were aged 20–35 years, namely 38 people (95%), while the age groups <20 years and >35 years each amounted to only 1 person (2.5%). These results indicate that the majority of family planning acceptors are of mature reproductive age, so they are considered more ready to make decisions regarding contraceptive use.

**Table 2.** Frequency Distribution Based on Number of Children.

| Category     | Frequency | Percentage (%) | Valid Percentage (%) | Accumulative Percentage (%) |
|--------------|-----------|----------------|----------------------|-----------------------------|
| Primigravida | 17        | 42.5           | 42.5                 | 42.5                        |
| Multigravida | 23        | 57.5           | 57.5                 | 100.0                       |
| <b>Total</b> | <b>40</b> | <b>100.0</b>   | <b>100.0</b>         |                             |

Table 2 shows that the majority of respondents belonged to the multigravida group, namely 23 people (57.5%), while there were 17 primigravidas (42.5%). This indicates that the majority of mothers who are family planning acceptors are those who have had previous experience of pregnancy, so they tend to have a better understanding of the need for managing pregnancy and the use of contraception based on this experience.

**Table 3.** Frequency Distribution Based on Mother's Education.

| Category                  | Frequency | Percentage (%) | Valid Percentage (%) | Accumulative Percentage (%) |
|---------------------------|-----------|----------------|----------------------|-----------------------------|
| <b>Elementary School</b>  | 15        | 37.5           | 37.5                 | 37.5                        |
| <b>Junior High School</b> | 13        | 32.5           | 32.5                 | 70.0                        |
| <b>Senior High School</b> | 12        | 30.0           | 30.0                 | 100.0                       |
| <b>Total</b>              | 40        | 100.0          | 100.0                |                             |

Table 3 reveals that the greater part of respondents had fundamental schooling levels, notably 15 people from elementary school (37.5%) and 13 people from junior high school (32.5%), while 12 people had a high school education (30%). This distribution pattern shows that the majority of mothers receiving family planning have education at the lower middle level, which can influence their ability to understand health information and determine the choice of contraceptive method.

**Table 4.** Frequency Distribution Based on Mother's Knowledge.

| Category        | Frequency | Percentage (%) | Valid Percentage (%) | Accumulative Percentage (%) |
|-----------------|-----------|----------------|----------------------|-----------------------------|
| <b>Good</b>     | 22        | 55.0           | 55.0                 | 55.0                        |
| <b>Not good</b> | 18        | 45.0           | 45.0                 | 100.0                       |
| <b>Total</b>    | 40        | 100.0          | 100.0                |                             |

Table 4 demonstrates that a bulk of respondents have a good level of knowledge regarding contraception, namely 22 people (55%), while 18 people (45%) are classified as having poor knowledge. These results indicate that the majority of mothers already have sufficient understanding about family planning methods, which can play a role in helping them consider and choose the type of contraception more appropriately.

**Table 5.** Frequency Distribution Based on Choice of Family Planning Method.

| Category                   | Frequency | Percentage (%) | Valid Percentage (%) | Accumulative Percentage (%) |
|----------------------------|-----------|----------------|----------------------|-----------------------------|
| <b>Choosing an IUD</b>     | 19        | 47.5           | 47.5                 | 47.5                        |
| <b>Not Choosing an IUD</b> | 21        | 52.5           | 52.5                 | 100.0                       |
| <b>Total</b>               | 40        | 100.0          | 100.0                |                             |

Table 5 shows that 19 respondents (47.5%) chose to use the IUD method, while 21 respondents (52.5%) did not choose this method. These findings illustrate that although almost half of respondents use IUDs, the majority still tend to choose other contraceptive methods. This choice may be influenced by various factors such as level of knowledge, previous experience, comfort, and perception of the safety of using the IUD.

## Bivariate Analysis

**Table 6.** Relationship between maternal knowledge and contraceptive choice.

|                        |                                    | Knowledge                               | Selection of birth control methods |
|------------------------|------------------------------------|---|------------------------------------|
| <b>Kendall's tau_b</b> | Knowledge                          | Correlation CoefficientSig. (2-tailed)N | 1.000.<br>.860** .00040<br>40      |
|                        | Selection of birth control methods | Correlation CoefficientSig. (2-tailed)N | 1.000.<br>.860** .00040<br>40      |

The evidence presented in Table 6 illustrates that there is a very strong and significant relationship between maternal knowledge and the choice of family planning method, with a correlation coefficient *Kendall's tau\_b* of 0.860 and a significance value of  $p = 0.000$ . These findings indicate that the higher the mother's level of knowledge about contraception, the greater their tendency to choose an appropriate family planning method. Thus, Knowledge acts as a vital element during the judgment steps for utilizing specific contraceptives.

### Relationship between mother's knowledge about IUD and contraceptive choice

Knowledge is all information that a person has and is obtained through the process of sensing an object. Knowledge is formed from the experience of seeing, hearing, feeling and thinking, so that it becomes the basis for a person's behavior and actions. Basically, knowledge is memory or understanding of material that has been studied, seen or heard previously (Delima et al., 2022).

This is in line with the opinion of Notoatmodjo (2020) who states that knowledge can be obtained through various sources, such as formal education, training, independent learning, as well as educational information obtained from print, visual and audio media. Therefore, the level of education is not the only factor that determines the extent of a person's knowledge. Several factors that influence knowledge include education, defined as a technique for modifying viewpoints and habits through learning experiences, teaching and training with the aim of increasing human intelligence (Arbaiyah et al., 2021).

However, someone who has low education does not always have a low level of knowledge. The mother's knowledge about various types of contraceptives such as pills, implants, vasectomies, tubectomies, condoms, injections and IUDs (*Intra Uterine Device*), whether obtained through health workers or from the surrounding environment, greatly influences the mother's decision to become a family planning acceptor (Harefa & Ndruru, 2023).

The research output demonstrate that a large portion of subjects maintain an excellent grasp of the contraception, namely 22 people (55%). This shows that even though some mothers have good or sufficient knowledge about contraception, they still do not choose to use an IUD. The decision not to use an IUD in well-informed mothers may be influenced by factors other than knowledge. Fear of side effects, such as bleeding or menstrual pain, can make mothers reluctant to use an IUD even though they understand its benefits (Perwira et al., 2022). Apart from that, the circulation of myths in society, for example the belief that IUDs can cause infertility or infection, can cause additional concerns. Another factor that also has an influence is the lack of optimal education provided, especially explaining in detail the safety and advantages of IUDs, as well as the feeling of discomfort related to private parts or social aspects that mothers feel when considering using this method.

Research by Santi et al., (2025) revealed that the selection of a contraceptive technique is largely determined by the individual's sense of comfort and level of confidence in the safety of a method, not solely by the amount of information they have. Apart from that, the existence of myths or misinformation about IUDs can also be an obstacle for mothers to choose this method, even though their knowledge is relatively good. This finding is reinforced by research by Rahmadani & Andayani (2024), which shows that sufficient or good knowledge about IUDs does not always encourage family planning acceptors to be interested in using this method. The mother's personal perception and beliefs are actually a more dominant factor in determining the type of contraception chosen.

#### **4. CONCLUSION**

Based on research findings which show that knowledge has a very strong relationship with the choice of IUD contraception method, efforts are needed to increase education and counseling for mothers receiving family planning regarding the benefits, effectiveness and safety of IUDs. Health workers at Auxiliary Health Care Kamawen need to provide more comprehensive and easy to understand information through individual and group counseling, as well as utilizing educational media such as leaflets, posters and videos. Apart from that, it is important for health workers to open a space for discussion and consultation so that mothers feel more confident and safe in determining the right family planning method. It is hoped that this increase in knowledge can encourage increased use of the IUD contraceptive method in the community.

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