Factors affecting the choice of intra uterine device contraceptives among women of reproductive age at the Wonosari II community health center

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Abstract

Unmet need is one of the problems in the Family Planning (FP) program because its prevalence is still high. Unmet need for FP refers to contraception that is not used by couples of childbearing age who want to delay pregnancy or do not want to have more children. The impacts of unmet need include abortion, closely spaced pregnancies, excessive childbearing, increased complications during pregnancy, complications during childbirth, and difficulties during the postpartum period. The average unmet need rate in Yogyakarta in 2023 reached 13.76%. The purpose of this study was to determine the factors influencing the choice of IUD contraception. This study used a quantitative method with analytical description and a cross-sectional design, involving 104 samples of acceptors from a total population of 1,612 implant and IUD users selected based on the quota sampling method. Data obtained from variables such as parity, contraceptive choice, education level, knowledge, spousal support, and health worker support were processed using editing, univariate analysis to see the frequency distribution, and bivariate analysis using the Chi-Square test. The results showed that there was a relationship between parity and IUD selection p value (0.001) with the majority being multiparous (54.8%), there is a relationship between knowledge and IUD selection p value (0.04) with the majority having high knowledge (71.3%), there is a relationship between spousal support and IUD selection p value (0.024) with the majority being supportive (95.2%), and there is a relationship between health worker support and IUD selection p value (0.006) with the majority being supportive (75%). For the education level factor, there was no relationship p value (0.616) with the majority having a secondary education level (52.9%). The results of this study are expected to be a source of information, add insight, and improve the analysis of low-knowledge acceptors so that they choose and sort out family planning with high effectiveness and low side effects.

Keywords: Unmet need; Family Planning; Intrauterine Device

1. Introduction

Unmet need is one of the problems in the Family Planning (FP) program because its prevalence is still high. According to (Chairunnisa, 2023) unmet need for FP refers to contraception that is not used by couples of childbearing age who want to delay pregnancy or do not want to have more children. The impacts of unmet need include abortion, closely spaced pregnancies, excessive childbearing, increased complications during pregnancy, complications during childbirth, and difficulties during the postpartum period. The unmet need figures in Yogyakarta in 2023 are 9.20% in Kulonprogo Regency, 15.50% in Bantul Regency, 13.10% in Gunungkidul Regency, 15.40% in Sleman Regency, and 15.60% in Yogyakarta City. (BKKBN, Development of Unmet Need for Family Planning in DIY by Regency/City, 2023). The target for MKJP use in Indonesia in 2024 is 28.39%. In 2022, the highest number of MKJP acceptors in Gunungkidul was in the Saptosari Community Health Center working area, reaching 3,760 people, the second highest was in the Wonosari II Community Health Center working area with 2,276 people, and the third highest was in the Semanu I Community Health Center working area with 2,222 people. In 2023, the number of MKJP acceptors at the Wonosari II Community Health Center reached 1,562, and the number of IUD acceptors reached 982. In 2024, the number of MKJP acceptors rose to 1,612, and the number of IUD acceptors also rose to 1,015 (Kesga, 2024).

At the Wonosari II Community Health Center, cadres have been involved to assist midwives in family planning counseling and to pass on all information to acceptors in the village. Efforts to reduce the incidence of unmet need require managing population growth rates by implementing family planning (FP) programs. Government Regulation No. 28 of 2024 (BKKBN, 2023) on the implementation of the Health Law covers government efforts to improve promotive and preventive services, one of which is the provision of contraceptives for married women of childbearing age. Previous research has found factors associated with the choice of IUD contraceptives, including parity, education, knowledge, spousal support, and health worker support.

2. Method

This study aims to determine the factors that greatly influence the choice of IUD contraception at the Wonosari II Gunungkidul Community Health Center. This study has ethical approval with letter No.4734/KEP-UNISA/VIII2025. The method used in this study was quantitative with an analytical survey method and a cross-sectional design. The population consisted of 1,612 acceptors in the working area of the Wonosari II Community Health Center. The research sample consisted of 104 IUD and implant contraceptive acceptors, which were determined using the Solvin formula. The sample was determined using the quota sampling method. This study was conducted in August 2025 for one week by distributing questionnaires at the health center and distributing Google Forms questionnaires through village cadres and local midwives. The inclusion criteria included acceptors aged 20-35 years and acceptors who were willing to fill out the questionnaire. Meanwhile, the exclusion criteria included acceptors who were illiterate. Data collection used primary data covering identity, education level, number of children, contraceptive use, knowledge questions, husband support, and health worker support. In this study, validity and reliability tests were not carried out because the adoption questionnaire used had already been tested by previous researchers. Data processing was carried out through data collection, editing, scoring, coding, processing, and data cleaning. The data was compiled in a master table and analyzed using univariate analysis to see the frequency distribution and bivariate analysis to see the relationship with the chi-square test.

3. Result and Discussion

3.1. Univariate Analysis

Univariate analysis was performed to obtain the frequency distribution of knowledge, parity, education level, husband support, health worker support, and IUD contraceptive choice at the Wonosari II Community Health Center. The results of this analysis can be seen in the following table.

Table 3.1 Frequency distribution of contraceptive choice, parity, education, knowledge, spousal support, and health worker support among WUS at the Wonosari II Community Health Center.

Variable	Frequency (n = 104)	Percentage (%)
Contraceptive selection		
Implant	30	28,8%
IUD	74	71,2%
Parity		
Primipara	47	45,2%
Multipara	57	54,8%
Level of Education		
Elementary (Elementary/ Junior High School)	21	20,2%
Secondary (high school/vocational high school)	55	52,9%
Higher (university equivalent)	28	26,9%

Knowledge		
Low	28	26,9%
High	76	73,1%
Husband's support		
Doesn't support	5	4,8%
Supports	99	95,2%
Health worker support		
Doesn't support	26	25%
Support	78	75%

The univariate analysis results in Table 4.1 above show that most respondents (71.2%) use IUD contraception, most respondents (54.8%) have ≥2 children (multipara), most respondents (52.9%) have a secondary education, the majority (73.1%) had high/good knowledge, the majority (95.2%) received support from their husbands in choosing contraception, and the majority (75%) received support and detailed explanations about IUD contraception from health workers.

3.2. Bivariate Analysis

3.2.1 The relationship between parity and IUD contraceptive choice

The results of the analysis of the relationship between parity/number of live births and contraceptive choice can be seen in the following table.

Table 3.2.1 Relationship between parity and IUD contraceptive choice among WUS at the Wonosari II Community Health Center.

Parity	**contraceptive selection**				**Total**		***p value***	***OR* (CI 95%)**
	Implant		**IUD**					
	f	**%**	**f**	**%**	**f**	**%**		
Primipara	21	44,7%	26	55,3%	47	100%	0,001	4,308 (1.725 – 10.757)
Multipara	9	15,8%	48	84,2%	57	100%		

The results of the table analysis show that 57 respondents had ≥ 2 children and the majority (84.2%) chose IUD contraception from 47 respondents who had 1 child who chose IUD contraception (55.3%). The results of the chi-square analysis showed that the p-value was 0.001, indicating a relationship between parity and the choice of IUD contraception at the Wonosari II Community Health Center. (OR = 4.308) This means that respondents who had ≥ 2 children (multiparous) were 4.308 times more likely to choose IUD contraception than primiparous respondents. This study is in line with research (Sugiana, 2021) which shows that the number of living children greatly influences women of childbearing age in choosing which contraceptive device to use. Mothers who have ≤ 1 child tend to use contraceptives other than IUDs, while mothers who have ≥ 2 children tend to choose

IUD contraceptives. Repeated childbirth experiences influence them in deciding and choosing the type of IUD contraception.

This study contradicts the findings of (Amallkariana, 2025), which reported a p-value of 0.533, leading to the acceptance of the null hypothesis (Ho). Therefore, it can be concluded that there is no relationship between parity and the use of IUDs after childbirth. The number of living children influences couples of reproductive age in determining their choice of contraception. Primiparous women typically use less effective forms of contraception.

Women who have two or more children are advised to use long-term contraception, such as IUDs or other methods, because they are highly effective and the likelihood of becoming pregnant again is relatively low. However, the use of contraceptive methods tends to decline in groups with a parity of more than four. This may be because mothers with more than four children have generally passed the ideal reproductive age for pregnancy or are over 30 years old (Hanefa, 2023).

3.2.2 The Relationship Between Health Status and the Choice of IUD Contraception

The results of the analysis of the relationship between education level and contraceptive choice can be seen in the following table

Table 3.2.2 Relationship between education level and IUD contraceptive choice among WUS at the Wonosari II Community Health Center.

Level of Education	Contraceptive selection				Total		*p value*	*OR* (CI 95%)
	Implant		IUD					
	f	%	f	%	f	%		
Elementary (Elementary/ Junior High School)	5	23,8%	16	76,2%	21	100%		
Secondary (Senior High School/ Vocational High School)	15	27,3%	40	72,7%	55	100%	0,616	-
Higher (University equivalent)	10	35,7%	18	64,3%	28	100%		

The results of the table analysis show that 16 respondents with elementary education (76.2%) chose IUD contraception. Forty respondents with secondary education mostly (72.7%) chose IUD contraception, and of the 10 respondents with higher education, most (64.3%) chose IUD contraception. The results of the chi-square analysis showed that the p-value = 0.616, which means that there is no relationship between education level and the choice of IUD contraception at the Wonosari II Community Health Center.

This study is in line with Yopi's (2023) research with a p-value of 0.440, which means that there is no relationship between education and IUD use. Education plays a role in influencing a person's ability to receive information, both from other people and from the mass media. Individuals with higher levels of education tend to obtain information more easily, while low education can be an obstacle to development and attitudes towards new values that are introduced. The higher a person's education, the more their knowledge and skills are expected to increase. Therefore, education is seen as an important factor in determining human quality, because through education, individual potential can be developed (Wulandari, 2023).

This study contradicts the research conducted by Yeni (2023), which found that the majority of mothers had a basic level of education (elementary/junior high school). However, a mother's low level of education does not necessarily mean that her knowledge is also low. Despite having limited formal education, mothers who have given birth can still obtain information about post-placental IUD insertion through educational activities or counseling provided by health workers at hospitals. Thus, post-placental IUD insertion is still possible for mothers with various levels of education. In addition, prospective acceptors can also easily access information related to the post-placental IUD contraceptive method through various media (Susilawati, 2023).

3.2.3 The relationship between knowledge and the choice of IUD contraception

The results of the knowledge analysis regarding IUD contraceptive selection can be seen in the following table

Table 3.2.3 Results of knowledge analysis with IUD contraceptive selection among WUS at the Wonosari II Community Health Center.

Knowledge	Contraceptive selection						*p value*	*OR* (CI 95%)
	Implant		IUD		Total			
	f	%	f	%	f	%		
Low	14	50%	14	50%	28	100%	0,004	3,750 (1.489 – 9.443)
High	16	21,1%	60	78,9%	76	100%		

The results of the analysis in Table 4.4 show that 28 respondents with low knowledge (50%) chose non-IUD contraception, while most of the 76 respondents with high knowledge (78.9%) chose IUD contraception. The results of the chi-square analysis show that the p-value = 0.004, which means there is a relationship between knowledge and the choice of IUD contraception at the Wonosari II Community Health Center. (OR = 3.750) means that respondents with high knowledge are 3.750 times more likely to choose IUD contraception than respondents with low knowledge.

This study is in line with research (Yuniarti, 2025) The p-value of 0.008 indicates that knowledge influences the use of IUD contraception. This factor shows that knowledge is important for acceptors to have, because with it, acceptors can analyze and compare high-effectiveness contraception with low-effectiveness contraception, as well as their side effects. In addition, this knowledge is also obtained through counseling provided by health workers, so that women of reproductive age (WUS) better understand the benefits of IUDs and are encouraged to choose them according to their needs.

This research contradicts the researcher (Natalia, 2024) The results of the Chi-Square test between respondents' knowledge and their choice of contraception method yielded a p-value of 0.107 > 0.05, meaning that H0 was accepted and Ha was rejected, indicating that there was no relationship between knowledge and the choice of long-term contraception methods at the Ubung Community Health Center.

Knowledge plays an important role in influencing a person's decision to choose the right contraceptive method. Individuals with a good level of knowledge will understand the effectiveness of long-term contraceptives, such as implants, and know the requirements for their use without focusing solely on the possible adverse side effects. Based on the results of the study, it can be concluded that contraceptive acceptors' knowledge is closely related to their choice of long-term contraceptive methods (MKJP). Good knowledge about a contraceptive method will shape the acceptors' perspective and encourage them to choose the contraceptive method that best suits their needs (Suryani, 2025).

3.2.4 The relationship between spousal support and the choice of IUD contraception

The results of the analysis of husband support for IUD contraception selection can be seen in the following table

Table 3.2.4 Results of analysis of husband support for IUD contraceptive selection among WUS at Wonosari II Community Health Center.

Husban's support	Pemilihan Kontrasepsi				Total		*p value*	*OR* (CI 95%)
	Implant		IUD					
	f	%	f	%	f	%		
Doesn't support	4	80%	1	20%	5	100%	0,024	11,231 (1.200 – 105.132)
Support	26	26,3%	73	73,7%	99	100%		

The results of Table 4.5 show that 4 respondents who did not receive support from their husbands mostly (80%) chose non-IUD contraception, while 99 respondents mostly (73.7%) chose IUD contraception. The chi-square results show that the p-value = 0.024, which means there is a relationship between spousal support and the choice of IUD contraception. The value (OR = 11.231) means that respondents with spousal support are 11.231 times more likely to choose IUD contraception than respondents who did not receive spousal support.

This study is in line with research conducted by (Hidayati, 2022) The p-value result was 0.006 ($p < 0.05$), which means that there is a significant relationship between husband support and the choice of IUD contraception. This shows that husbands play an active role by providing tangible support to their wives in choosing contraception. This support includes accompanying their wives during consultations and during IUD insertion. If husbands are unable to attend, they usually ask local cadres to accompany their wives.

This study is not in line with the research (Nurrasyidah, 2023) A p-value of 1.000 means that there is no relationship between husband support and the interest of fertile-age couples in using IUD contraception. Husband support is divided into several categories, namely providing information to explain the issue; second, giving good feedback; and third, listening to the wife's confessions and complaints.

The support of husbands and families plays a very strong role in determining decisions, including those related to the choice of contraception methods. Although wives actually have their own preferences regarding the type of contraception to be used, the final decision is generally still determined by their husbands. The husband's significant involvement not only makes it easier for the wife to make choices, but also fosters awareness that reproductive health issues are a shared responsibility, not just a woman's. In addition, husbands play a role in providing support by meeting their wives' various needs when undergoing reproductive health examinations. This form of involvement is evident when husbands are willing to take the time to accompany their wives during contraceptive insertion and follow-up examinations (Desi Satria, 2022).

3.2.5 The relationship between healthcare support and the choice of IUD contraception

The results of the analysis of health worker support for IUD contraceptive selection can be seen in the following table.

Table 3.2.5 Results of analysis of health worker support for IUD contraceptive selection among WUS at the Wonosari II Community Health Center.

Health workers support	Contraceptive selection	Total	*p value*	*OR* (CI 95%)

	Implant		IUD					
	f	%	f	%	f	%		
Doesn't support	13	50%	13	50%	26	100%		
Support	17	21,8%	61	78,2%	78	100%	0,006	3,588 (1.404 – 9.168)

The results of the analysis in Table 4.6 show that half of the respondents who did not receive support from health workers (50%) chose IUD contraception rather than non-IUD contraception. Of the 78 respondents who received support from health workers, the majority (78.2%) chose IUD contraception. The results of the chi-square analysis show that the p-value = 0.006 (p-value < 0.005), indicating a significant association between support from healthcare providers and the choice of IUD contraception at the Wonosari II Community Health Center. The value (OR = 3.588) means that respondents who received support from health workers were 3.588 times more likely to choose IUD contraception than respondents who did not receive support from health workers. This study is in line with Tri Sundari's (2020) research, which found that most respondents received support, counseling, and explanations from health workers. This study has limitations, including the health worker support questionnaire, which does not specifically explain the indications/contraindications.

According to (Meilani, 2023) research the role of health workers is a form of responsibility expected of health personnel in providing services to the community in order to improve health. In the context of family planning, service quality is an important aspect in supporting the achievement of reproductive health services. One of the efforts made is through the provision of information, education, and communication (IEC). Through IEC activities, midwives can help prospective acceptors in determining the most appropriate contraceptive method for their needs, while also assisting acceptors so that they are able to use contraception for a longer period of time so that the success of the family planning program can be more optimal. The optimal form of support from health workers in the use of MKJP includes providing emotional support, instrumental assistance, objective assessment, and comprehensive information about the consequences of each contraceptive choice, both from a medical and non-medical perspective, so that acceptors can make the right decision without regret in the future.

Every woman has the right and should receive information about contraceptives, either through professional health workers or from various other sources such as online media. Research by Yeshiwas Abebaw, et al (2019) in (Darmayanti, 2024), explains that a midwife's limited knowledge and experience can influence a prospective acceptor's decision not to choose a contraceptive. This condition highlights the importance of training for midwives, nurses, general practitioners, and other health workers in providing counseling to couples of reproductive age (Abebaw, 2019). This study is also in line with the results of research conducted by (Sundari, 2020).

Family planning services through structured and high-quality IEC activities are an important and crucial aspect in efforts to realize reproductive health services. Health workers play a role in educating prospective acceptors so that they are able to know, understand, and determine the most suitable type of contraception, which ultimately has a positive impact on increasing the use of IUD contraception. In addition, the role of health workers as family planning service providers also needs to be strengthened through Contraceptive Technology Update (CTU) training to improve their knowledge, skills, and positive attitudes towards IUD insertion. This will further encourage and motivate women to choose and use IUD contraception (Darmayanti, 2024).

4. Conclusion

The results of this study indicate that most IUD acceptors at the Wonosari II Community Health Center have ≥ 2 children (84.2%), most acceptors who use IUDs (72.7%) had a secondary education background from high school/vocational school or equivalent, most IUD users also had high knowledge (78.9%) and were competent in answering the questionnaire provided by the researcher, most respondents (73.7%) who used IUDs also received support from their husbands in determining the contraceptive method used, and most others, such as respondents who used IUD contraception (78.2%), received counseling, guidance, and support from health workers.

The results of this study indicate that factors influencing the choice of IUD contraception include parity, knowledge, spousal support, and health support. These factors were found to be closely related. The most dominant factor in this study was spousal support, with an OR value of 11.231. This was also reinforced by the results of previous studies.

In this study, there are still many factors that have not been examined beyond those already mentioned. Many other factors have a strong influence on the choice of IUD contraception, and therefore the author recommends that future researchers examine other factors that have not been examined by the author. For acceptors with low knowledge, they can play an active role in every family planning activity organized by the local health center, government counseling, and seeking information sources from the media and the surrounding environment. For the Wonosari II Health Center, it is hoped that it can maintain the latest and most comprehensive family planning counseling and information by inviting cadres to participate in their respective villages.

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