



(RESEARCH ARTICLE)



Factors that influence the choice of intrauterine contraceptive devices at one of the Surabaya government hospitals

Titis Suciningrum ^{1,*}, Ratna Dwi Jayanti ², Budi Prasetyo ² and Ivon Diah Wittiarika ²

¹ Student Midwifery, Faculty of Medicine, Airlangga University, Indonesia.

² Lecture, Faculty of Medicine, Airlangga University, Indonesia.

World Journal of Advanced Research and Reviews, 2025, 25(01), 376-384

Publication history: Received on 25 November 2024; revised on 04 January 2025; accepted on 06 January 2025

Article DOI: <https://doi.org/10.30574/wjarr.2025.25.1.0016>

Abstract

Introduction: The priority of the Postpartum Family Planning service program at Hospital Surabaya is Postplacental Family Planning of the IUD and MOW types. The target for the use of Postpartum Family Planning at RSPAL refers to the Regulation of the Head of BKKBN Number 24 of 2017 concerning Postpartum and Post Miscarriage of Family Planning Services, which is 70%. Preliminary study data from 2022 and 2023 showed a decrease in achievement compared to the previous year, and is still far below the desired target. The purpose of the study was to determine the factors that influence the selection of postplacental Intrauterine Contraceptive Devices (IUD) at Hospital Surabaya.

Method: Quantitative research type with observational analytical design, cross-sectional study The population in this study were all postpartum mothers who gave birth at Hospital Surabaya. Sampling technique with a total sampling of 62 people. Research instrument with a questionnaire. Data analysis using the Chi-Square test.

Results: The most age is 20-35 years (81%), the most parity is 1-2 people (71%), the most education level is Middle (63%), the most employment status is not working (66%), the most income <UMR (63%), the most knowledge is less category (43.5%), the most support from husband is supportive (56.5%), the most counseling ever (63%), the most information received is good (58%). There is no significant relationship between age ($p = 0.160$), parity ($p = 0.117$), education level ($p = 0.911$), employment status ($p = 0.961$), and income ($p = 0.794$) with the selection of Postplacental IUD. While knowledge ($p < 0.001$), husband support ($p < 0.001$), counseling ($p = 0.001$) and receipt of information ($p = 0.001$) have a relationship with the selection of Postplacental IUD.

Conclusion: Age, parity, education level, employment status, and income are not associated with the choice of Postplacental IUD. While knowledge, husband's support, counseling and receipt of information are significantly associated with the choice of Postplacental IUD at Hospital Surabaya.

Keywords: Postpartum family planning; Postplacental IUD; Sampling technique; Counseling

1. Introduction

Family planning (KB) is an action that helps individuals or married couples to achieve certain goals, avoid unwanted births, regulate the spacing of pregnancies, and determine the number of children in the family. A study conducted by Utomo (2021) in Indonesia shows that family planning has a positive impact on maternal health because it can prevent unwanted pregnancies and can reduce MMR by 37-43% through the use of contraception (Utomo et al., 2021).

Efforts to increase the use of long-term contraception are aimed at postpartum mothers by using postplacental IUDs. The use of this IUD can be used immediately after delivery, even if used in the first 10 minutes to 48 hours after the

* Corresponding author: Titis Suciningrum

placenta is born, it can reduce lost opportunities in family planning services, because this family planning method is very effective in reducing the rate of births that are too close (Ministry of Health of the Republic of Indonesia, 2014; Rusmini et al., 2021). Based on the Indonesian Health Profile (2021), the number of births in Indonesia reaches 4.8 million per year and 90.9% are handled in health facilities. If postpartum mothers are served with postplacental IUDs, the contribution of IUDs will have a positive impact in supporting the government's program while simultaneously reducing the growth rate of residents (Ministry of Health of the Republic of Indonesia, 2022).

The increase in family planning participation in Indonesia is still dominated by non-MKJP contraception. The use of IUDs as a contraceptive in Indonesia is still less than injection, pill and implant methods, namely 8.35% of all contraception (BPS, 2022). In fact, when compared with other contraceptive methods, the IUD has several advantages such as cheap, effective, minimal side effects and practical because it is carried out after the placenta is born while reducing morbidity (Hartanto, 2010).

In a preliminary study at a hospital in Surabaya, data was obtained, in 2022 showing that out of 597 mothers giving birth there were 133 acceptors (22.3%) using postplacental IUDs, then in 2023 there were 20.7% or 138 acceptors from 667 postplacental mothers IUD inserted. The decline in the use of the IUD contraceptive method is of course influenced by many things, including both internal and external influences. Based on the background of the problem, research was conducted on the factors that influence the choice of post-placental IUD.

2. Materials and methods

This research uses quantitative methods with a cross sectional approach. The samples in this study were all mothers 6 hours - 72 hours postpartum and post-caesarean section in the period 12 February to 15 March at one of the government hospitals in Surabaya, sampling was based on inclusion criteria and exclusion criteria. Sampling used total sampling, and a sample of 62 postpartum mothers was obtained. The data collection technique uses a questionnaire, then the data is analyzed using the chi square test. To test significance, a significance limit of 5% ($\alpha = 0.05$) was used. It is possible that there is a significant relationship between two variables if the p-value is less than $\alpha 0.05$, and there is no relationship if the p-value is greater than $\alpha 0.05$.

3. Results

The frequency distribution of the respondents studied can be described based on age, parity, education level, employment status, income, knowledge, husband's support, counseling, and receipt of information can be seen in the table Frequency distribution of respondents 1.

Table 1 Frequency distribution of respondents

Variable	Frequency (n=62)	Percentage
Mother's Age		
20-35 years	50	81
> 35 years	12	19
Parity		
1-2 people	44	71
> 2 people	18	29
Level of education		
Base	7	11
Intermediate	39	63
On	16	26
Job status		
Doesn't work	41	66
Work	21	34

Income		
Below UMR	39	63
Above the UMR	23	37
Knowledge		
Not enough	27	43.5
Enough	19	30.6
Good	16	25.8
Husband's support		
not supported	27	43.5
Support	35	56.5
Counseling		
Never	23	37
Once	39	63
Information Reception		
Not enough	26	42
Good	36	58

The results of statistical analysis of age as a factor in selecting a Postplacental IUD are in Table 2. The relationship between age and postplacental IUD selection was tested using the Chi-Square test $\alpha 0.05$ It was found that 25% of cells had a value of less than 5 so that the Chi-Square requirement was not met. The p value can be determined from the results of the Fisher Exact test, which shows p 0.160, so it can be concluded that there is no relationship between age and the choice of postplacental IUD.

Table 2 Age as a factor in selecting a postplacental IUD

Age	Postplacental IUD Selection				Total		<i>Fischer Exact</i>
	Do not use		Use		N	%	
	n	%	n	%			
20-35 years	35	70	15	30	50	100	0.160
>35 years	11	91.6	1	8.4	12	100	

The relationship between parity and postplacental IUD selection was tested using the Chi-Square test $\alpha 0.05$ It was found that 25% of cells had a value of less than 5 so that the Chi-Square requirement was not met. The p value can be determined from the results of the Fisher Exact test, the result was p 0.117, so it was concluded that there was no relationship between parity and the choice of postplacental IUD. The results of statistical analysis of parity as a factor in selecting a Postplacental IUD are as follows:

Table 3 Parity factors in selecting a postplacental IUD

Parity	Postplacental IUD Selection				Total		<i>Fischer Exact</i>
	Do not use		Use		N	%	
	n	%	n	%			
1-2	30	68.2	14	31.8	44	100	0.117
> 2	16	88.8	2	11.2	18	100	

The relationship between education level and postplacental IUD selection was tested using the Chi-Square test $\alpha 0.05$. It was found that 33.3% of cells had a value of less than 5 so that the Chi-Square requirement was not met. The p value can be determined from the results of the Fisher Exact test, which shows a result of p 0.911, so it can be concluded that there is no relationship between education level and the choice of postplacental IUD. The results of statistical analysis of education level as a factor in selecting a Postplacental IUD are as follows:

Table 4 Education level as a factor selection Postplacental IUD

Level of education	Postplacental IUD Selection				Total		Fischer Exact
	Do not use		Use		N	%	
	n	%	n	%			
Base	6	85.7	1	14.3	7	100	0.911
Intermediate	28	71.8	11	28.2	39	100	
Tall	12	75	4	25	16	100	

The results obtained had a value of 0.961, so it was concluded that there was no relationship between employment status and the choice of postplacental IUD. The results of statistical analysis of employment status as a factor in selecting a Postplacental IUD are as follows:

Table 5 Employment status as a factor in selecting a postplacental IUD

Job status	Postplacental IUD Selection				Total		P Value
	Do not use		Use		N	%	
	n	%	n	%			
Doesn't work	31	75.6	10	24.4	41	100	0.961
Work	15	71.4	6	28.6	21	100	

The results obtained had a p value of 0.794, so it was concluded that there was no relationship between income and the choice of postplacental IUD. The results of statistical analysis of respondents' income as a factor in selecting a Postplacental IUD are as follows:

Table 6 Income as a factor in IUD selection Postplacental

Income	Postplacental IUD Selection				Total		P Value
	Do not use		Use		N	%	
	n	%	n	%			
Below UMR	28	71.8	11	28.2	39	100	0.794
Above the UMR	18	78.2	5	21.8	23	100	

The relationship between respondents' knowledge and the choice of postplacental IUD was tested using the Chi-Square test. It was found that 33.3% of cells had a value of less than 5 so that the Chi-Square requirement was not met. The p value can be determined from the results of the Fisher Exact test, which shows $p < 0.001$. The contingency coefficient result is 0.503, which means there is a significant relationship between maternal knowledge and the choice to use a postplacental IUD with a moderate strength of relationship. The results of the statistical analysis of knowledge as a factor in selecting a Postplacental IUD are as follows:

Table 7 Knowledge as a factor in selecting a Postplacental IUD

Knowledge	Postplacental IUD Selection				Total		Fischer Exact	Contingency Coefficient
	Do not use		Use		N	%		
	n	%	n	%				
Not enough	27	100	0	0	27	100	< 0.001	0.503
Enough	13	68.4	6	31.6	19	100		
Good	6	37.5	10	62.5	16	100		

The results obtained were p value <0.001. The contingency coefficient result is 0.403, which means there is a significant relationship between the mother's husband's support and the choice to use a postplacental IUD with moderate strength of the relationship. The results of the statistical analysis of the respondent's husband's support as a factor in selecting a Postplacental IUD are as follows:

Table 8 Husband's support as a factor in selecting a postplacental IUD

Husband's support	Postplacental IUD Selection				Total		P Value	Contingency coefficient
	Do not use		Use		N	%		
	n	%	n	%				
Does not support	27	100	0	0	27	100	< 0.001	0.460
Support	19	54.3	16	45.7	35	100		

The results obtained have a p value of 0.001. The contingency coefficient result is 0.413, which means there is a significant relationship between husband's support and the choice to use a postplacental IUD with a medium strength relationship. The results of statistical analysis of counseling that respondents have obtained as a factor in selecting a Postplacental IUD are as follows:

Table 9 Counseling as a factor in selecting a Postplacental IUD

Counseling	Postplacental IUD Selection				Total		P Value	Contingency coefficient
	Do not use		Use		N	%		
	n	%	n	%				
Never	23	100	0	0	23	100	0.001	0.413
Once	23	59	16	41	39	100		

The results obtained were p value <0.001. The contingency coefficient result is 0.448, which means there is a significant relationship between the mother's husband's support and the choice to use a postplacental IUD with a medium strength relationship. The results of statistical analysis of the receipt of information obtained by respondents as a factor in selecting a Postplacental IUD are as follows:

Table 10 Acceptance of information as a factor in postplacental IUD selection

Reception of information	Postplacental IUD Selection				Total		P Value	Contingency coefficient
	Do not use		Use		N	%		
	n	%	n	%				
Not enough	26	100	0	0	26	100	<0.001	0.448
Good	20	55.5	16	44.5	36	100		

4. Discussion

The research results table 2 shows that the majority of respondents who chose the Postplacental IUD were in the 20-35 year age range, namely 30% of the total respondents in that age group. On the other hand, respondents aged over 35 years rarely choose this method. The results of the Chi-Square and Fisher Exact tests showed a p-value of 0.160 (p-value >0.05) so it was concluded that there was no significant relationship between age and the choice of Postplacental IUD. Based on the univariate results, the proportions of the age groups studied appear to contribute to the conclusion that there is no association between Postplacental IUD use and maternal age. The sample in this study was relatively small (n = 62), consisting of postpartum mothers who gave birth at hospital in Surabaya, so it may not have sufficient power to detect an association between age and postplacental IUD selection.

Based on the research results table 3, the majority of respondents had 1-2 children (71%). It was found that 31.8% of respondents with 1-2 children chose to use the Postplacental IUD, while only 11.2% of respondents who had more than 2 children chose this method. The results of statistical tests using Chi-Square and Fisher Exact gave a p-value of 0.117 (p-value >0.05), so it was concluded that there was no significant relationship between parity and the choice of Postplacental IUD. Different opinions Rahman et al., (2017), that the number of living children a woman has will provide experience and knowledge so that women can make the right decision about the contraceptive method or device to be used (Rahman et al., 2017). also research Indriyani (2020), the results of the chi-square test obtained a p value of 0.002 (p-value <0.05) stating that there was a relationship between parity and the use of IUD contraception in postpartum mothers at the Majalengka Hospital, Majalengka Regency in 2018, and research by Anggrainy et al. (2022) The results of the chi-square test showed a p value of 0.008 (p value <0.05), indicating that there was a relationship between parity and the use of IUD contraception.

The parity factor with more than 2 living children has not influenced the mother's decision to use a postplacental IUD. This can be caused by various changes, including changes in culture and beliefs that some people still hold that encourage the desire to use an IUD. The reason for wanting to get pregnant immediately is because they have a history of difficulty having children, or a tendency to want to have children of a certain gender may make people reluctant to use an IUD after giving birth. If you only have daughters or sons, this can be an obstacle in making the decision to end a pregnancy at the age of 35 years or more, even though they already have two children.

The results table 4 shows that the majority of respondents had secondary education (63%). As many as 28.2% of this group tend to choose to use the Postplacental IUD more than those with higher education (25%). The results of the Chi-Square and Fisher Exact tests showed a p-value of 0.911 (p-value >0.05), which means there is no significant relationship between education level and the choice of Postplacental IUD. Education level is one of the most important factors that can influence the level of knowledge. Highly educated women tend to have better knowledge about various contraceptive methods, including postplacental IUDs. This knowledge helps them to make more informed decisions regarding their contraceptive choices.

In contrast, women with less education may have less knowledge about modern contraception and have less access to accurate information. This may change their perception of the Postplacental IUD and lead to a desire for a contraceptive method that they perceive as more familiar or that is supported by their community. Research shows that lack of education is often associated with mistrust or lack of adequate information about contraceptive methods such as the IUD. However, several studies have found that education level does not have a significant relationship with the choice of postplacental IUD. This shows that although education can increase knowledge and positive attitudes, other factors may be more dominant in determining the choice of contraceptive method. If women choose contraceptive methods based on personal preference or influence from those closest to them, then education becomes a less significant factor.

This research table 5 shows that 28.6% of working respondents chose to use a postplacental IUD, while 24.4% of respondents who did not work chose to use a postplacental IUD. However, the results of statistical tests using Chi-Square showed a p-value of 0.961 (p-value >0.05) so it was concluded that there was no relationship between employment status and using the Postplacental IUD. Although there was no significant difference in the proportion of respondents who used and did not use an IUD, this difference only occurred in the research sample and did not occur in an adequate population. The results of this study are in line with research Khoiriyah et al., (2022) which shows there is no relationship between employment and IUD selection.

At table 5 show respondents whose income was below the minimum wage (28.2%) chose to use a postplacental IUD. Meanwhile, of the 23 people (100%) of respondents who had incomes above the minimum wage, only 5 people (21.8%) chose to use a postplacental IUD. The results of statistical tests using Chi-Square showed a p value of 0.794 (p value >0.05) so it was concluded that there was no relationship between income and the use of Postplacental.

In research conducted in Bangladesh and Tanzania, installing a postplacental IUD can save \$282,540 or the equivalent of 4 billion rupiah and is the contraceptive method that contributes most to the cost of unwanted pregnancy. However, this description is not in line with the results of this study which show that there is no relationship between income and use of the Postplacental IUD, this may be because IUD installation in Indonesia is funded by the government, so the cost of installation does not directly affect the respondent's income.

This research in table 8 shows that the majority of respondents (43.5%) have poor knowledge and only 25.8% have good knowledge. Based on the results of statistical tests using Chi-square, it shows a p-value of 0.001 ($p\text{-value} > 0.05$), so it can be concluded that there is a relationship between knowledge and the use of Postplacental. In line with research conducted by Permatasari et al (2023) that knowledge is significantly related to postnatal IUD selection.

Knowledge is the result of knowing and occurs after people sense an object. Good or poor knowledge can support a person's actions in using a health service and complying with the rules for its use. Knowledge about postnatal contraceptive methods can be taken into consideration by mothers to determine whether or not to use contraceptives in an effort to avoid unwanted births by arranging the distance between births and controlling the time of birth (Hartanto, 2010). The higher the mother's knowledge, the greater the opportunity to use post-placental IUD contraception.

This research in table 8 shows that husband's support has a significant influence in choosing a postplacental IUD, it can be seen from 62 respondents, 27 of whom did not receive support from their husbands and all of them chose not to use a postplacental IUD. In contrast to respondents who received support from their husbands, almost all of them, namely 16 out of 19 respondents, chose to use a postplacental IUD, with the results of statistical tests using Chi-Square showing a p-value of 0.001 ($p\text{-value} > 0.05$), so it was concluded that there was a relationship between husband's support. with the selection of a Postpartum IUD.

One of the indirect ways of men's participation is by supporting their wives in family planning. Husband's support is one of the socio-cultural factors that greatly influences the use of contraceptives for women as wives in particular and in the family in general (BKKBN, 2017). research conducted by Linda Permatasari et al (2023) shows that there is a relationship between husband's support and the choice of postplacental IUD. This is in line with the research results.

Based on the results of data analysis in table 9, 50% of respondents had never received counseling about the Postplacental IUD and all of them chose to use the Postplacental IUD. 41% of respondents who received counseling chose to use a Postplacental IUD with the results of statistical tests using Chi-Square showing a p-value of 0.001 ($p\text{-value} > 0.05$) so it was concluded that there was a relationship between counseling and the choice of Postplacental.

Counseling is a very important aspect in family planning and reproductive health services. Before receiving contraceptive services, clients and their partners must receive complete, clear and correct information from health workers in order to make the right choice. Counseling is carried out as an exchange of information and positive interactions between clients and officers to help clients recognize their needs, choose the best solution and make decisions that best suit the conditions being faced (BKKBN, 2017). In line with the results of this study and research conducted by Todungbua et al (2020), a history of family planning counseling is related to respondents' acceptance of the postpartum IUD.

Based on the results of the information reception table analysis, respondents who had good information reception had a greater chance of choosing to use a postplacental IUD. This can be seen in 20 respondents out of 62 respondents with good acceptance, 44.5% chose to use the Postplacental IUD and 26 respondents with poor information acceptance, none chose to use the Postplacental IUD. The results of statistical tests using Chi-Square showed a p-value of 0.001 ($p\text{-value} > 0.05$) so it was concluded that there was a relationship between receiving information and choosing a Postplacental IUD.

In line with research conducted by Mus seenun et al (2021) shows that there is a significant relationship between receiving information and the use of postplacental IUD. Information is everything we get about knowledge about something, such as information about contraception, pregnancy, and so on, which is conveyed by someone spoken through language or mass media. Quality family planning information can contribute to increasing the acceptor's understanding of child birth control knowledge (BKKBN, 2017).

5. Conclusion

Of the 9 variables studied, there were 5 unrelated factors and 4 related factors. These 4 related factors are related to husband's support, knowledge, counseling and receipt of information. To increase coverage of long-term contraception, especially post-placental IUD, it is hoped that health workers will not only provide education to families but are also able to provide education to families. It is hoped that family empowerment through counseling will increase the mother's interest in choosing a post-placental IUD.

This study has limitations, namely the number of samples cannot represent the entire population of postpartum mothers 6 - 72 hours on the factors that influence the selection of intrauterine contraceptive devices after placenta. So it is possible that these results will not be significant if used on postpartum mothers with different psycho-socio-cultural criteria.

Compliance with ethical standards

Disclosure of conflict of interest

There is no conflict of interest from any party in this research.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Affandi, B., 2014. Practical Guidebook for Contraceptive Services 3rd Ed., Bina Pustaka Sarwono Prawirohardjo, Jakarta.
- [2] Anggrainy, N., Amalia, R. and Effendi, H., 2022. The Relationship between Knowledge, Parity and Mother's Occupation with the Use of Intra Uterine Device Contraception. Scientific Journal of Batanghari University, Jambi, 22(2), pp.675-680.
- [3] Azwar, S., 2013. Human Attitude: Theory and Measurement, 2nd Edition., Pustaka Pelajar, Yogyakarta.
- [4] BKKBN, 2017. Regulation of the Head of BKKBN Number 24 of 2017 Concerning Postpartum and Post-Miscarriage Family Planning Services, Directorate of Reproductive Health, Jakarta.
- [5] BPS, 2022. Maternal and Child Health Profile Report 2022, Central Statistics Agency, Jakarta.
- [6] Dinengsih, S. and Rosyani, R., 2020. The Relation of Parity and Motivation With Post-Placental IUD Selection. STRADA Scientific Journal of Health, 9(2), pp.435-442.
- [7] Grimes, DA et al., 2010. Immediate post-partum insertion of intrauterine devices. The Cochrane Database of Systematic Reviews, (5), p.CD003036.
- [8] Hartanto, H., 2010. Family Planning and Contraception, Sinar Harapan Library.
- [9] Indriyani, YWI, 2020. Factors Related to the Use of IUD Contraception in Postpartum Mothers at Majalengka Regional Hospital, Majalengka Regency in 2018. YPIB Majalengka Health College Campus Journal, 8(1), pp.45-62.
- [10] Ministry of Health of the Republic of Indonesia, 2014. Guidelines for Postpartum Family Planning Services in Health Facilities, Ministry of Health of the Republic of Indonesia.
- [11] Ministry of Health of the Republic of Indonesia, 2022, Indonesian Health Profile 2021 [Online]. Available at: <https://kemkes.go.id/id/profil-kesehatan-indonesia-2021> [Accessed: 23 November 2023].
- [12] Ministry of Health of the Republic of Indonesia, DJKM, 2021. Contraceptive Service Training Module for Doctors and Midwives in Health Service Facilities, Ministry of Health of the Republic of Indonesia, Jakarta.
- [13] Khoiriyah, F., Ariadi, Yusrawati and Rahmi, L., 2022. Relationship between occupation and education with the choice of IUD contraception in Pauh District, Padang City, West Sumatra. Science Midwifery, 10(5), pp. 3891-3896.
- [14] Notoatmodjo, S., 2003. Education and Health Behavior, Rineka Cipta, Jakarta.

- [15] Notoatmodjo, S., 2018. Health Promotion Theory and Application, Rineka Cipta, Jakarta.
- [16] Pinem, S., 2014, Reproductive health and contraception [Online].
- [17] Rahman, F. et al., 2017. Family Planning Program & Contraceptive Methods, Zukzez Express, Banjarbaru.
- [18] Runjati, 2018. Midwifery Theory and Care: Volume 2, EGC Medical Book, Jakarta.
- [19] Rusmini, Purwandani, S., Utami, VN and Faizah, SN, 2021. Evidence-Based Family Planning and Reproductive Health Services, Trans Info Media, Jakarta.
- [20] Saifuddin, AB, 2014. Practical Guide Book for Contraceptive Services, Bina Pustaka Sarwono Prawirohardjo, Jakarta.
- [21] Setyaningrum, E., 2016. Family Planning Services, Trans Info Media, Jakarta.
- [22] Setyaningrum, E., 2021. Family Planning and Reproductive Health Services, Trans Info Media, Jakarta.
- [23] Soekidjo Notoatmodjo, 2018. Health research methodology, third edition., PT. Rineka Cipta, Jakarta.
- [24] Sugiyono, 2020. Quantitative, Qualitative and Mixed Methods Research Methods, Alfabeta.
- [25] Todungbua, P., Cahyanti, R. and Respati, S., 2020. Factors Associated with the Acceptance of Postpartum Intrauterine Contraceptive Devices in Samarinda. Journal of Reproductive Health, 7, p.119.
- [26] Tripertiwi, S., Mardiana, N. and Nurrachma, E., 2019. RELATIONSHIP BETWEEN MOTHER'S EMPLOYMENT STATUS AND MOTHER'S INTEREST IN USING IUD CONTRACEPTION AT BENGKURING COMMUNITY HEALTH CENTER, SAMARINDA CITY IN 2019.
- [27] Utomo, B. et al., 2021. The impact of family planning on maternal mortality in Indonesia: what future contribution can be expected? Population Health Metrics, 19(1), p.2.
- [28] Widiyati, E., Sumarni, S., Rozhikan and Rahayu, S., 2023. FACTORS RELATED TO THE USE OF IUD POST PLACENTA AT HJ. ANNA LASMANAH BANJARNEGARA REGIONAL HOSPITAL, DIV Midwifery Semarang.
- [29] Wiknjastro, H., 2016. Midwifery Science Fourth Edition, Fifth Printing., Bina Pustaka Sarwono Prawirohardjo Foundation, Jakarta.