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# Factors Influencing Low Interest in Postpartum Intrauterine Device (IUD) use among Women in South Bolaang Mongondow Regency, Indonesia

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**A R T I C L E I N F O**

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**A B S T R A C T**

**Introduction**: The family planning program is an initiative aimed at controlling population growth through birth control. Contraception serves as an effective method for planning pregnancies. This quantitative study employed a non-experimental design using an analytical observational method with a cross-sectional approach. The sample consist of 32 respondents selected through accidental sampling. Data were collected using a questionnaire and analyzed with the chi-square test at a significance level of 95% (α=0.05). Chi-square test results showed that the knowledge factor had a p-value of 0.009, indicating a significant relationship with interest in postpartum contraception with use Intrauterine Device (IUD). Husband's support had a p-value of 0.019, counseling or information provided by health workers had a p-value of 0.050, and cultural factors demonstrated a p-value of 0.009, all significantly associated with interest in postpartum contraception with IUD. In conclusion, this study demonstrates a significant relationship between maternal knowledge, husband's support, information provided by health workers, and cultural influences with the level of interest in IUD use among postnatal mothers.

## INTRODUCTION

The family planning program is a population control program through birth control. Family planning is an effective way to prevent maternal and child deaths by helping couples avoid high-risk pregnancies and reduce maternal mortality through pregnancy prevention, appropriate timing, and adequate spacing between pregnancies (1). Approximately 25-50% of deaths among women of childbearing age are related to pregnancy. Death during childbirth is a major factor to female mortality during their peak productive years(2).

The intrauterine device (IUD) is one of the most widely used contraceptive methods in the world. Globally, 14.3% of married women aged 15-49 choose an IUD for contraception, although usage rates vary by region Developing countries report higher IUD use (24.7%) compared with developed countries (12.7%). Regional use rates are estimated at 27% in Asia, 17.1% in Europe, 15.4% in Africa, and 15.7% in the Americas (3).

Based on data from the Central Bureau of Statistics of Indonesia (2024), contraceptive use is highest among women aged 15-49 in South Kalimantan (70.08%) and lowest inCentral Papua (11.39%). Nationally, IUD users declined from 36,155 in February 2020 to 23,383. Meanwhile, implants users increased from 51,536 to 81,062, injection users increased from 341,109 to 524,989 , pill users increased from 146,767 to 251,619 acceptors, condom users increased from 19,583 to 31,502, male sterilization (MOP) users from 1,196 to 2,283, and female sterilization (MOW) users from 8,093 to 13,571. By April, active family planning participants decreased by about 10%compared to the previous month, around 26 million active KB participants versus 36 million in March, an average drop of10%-15% across provinces (4). Data from the North Sulawesi Province BKKBN Service in 2024 showed that of29,804 postpartum mothers, only 652 used postpartum IUD contraception , compared with 371 using condoms, 4,175 using pills,10,227 using injections, 3,786 using implants, 187 undergoing MOW, and 4 undergoing MOP. In South Bolaang Mongondow Regency, BKKBN data for 2024 recorded 752 postpartum mothers, with only 241 using any postpartum contraception: 85 pill users, 71 injection users, 1 IUD user, 83 implant users, and 1 MOW user (5).

The use of IUD contraception after delivery remains relatively low in the community. Several factors contribute to this low uptake, including knowledge, attitude, parental support, husband's support, information from the family planning (KB) program, the quality of family planning services, economic conditions, age, and parity. Among these factors, husband's support is often the most influential in decision-making. A husband's involvement is crucialin planning household life, particularly in determining which family planning method to use. He is typically the first person to provide encouragement and support, and his attention and involvement can significantly

influence a wife's decision.. Postpartum family planning refers to efforts to prevent pregnancy by using contranceptive tools, drugs, or methods immediately after childbirth, up to 42 days or 6 weeks after delivery (3).

Based on data from the South Bolaang Mongondow Regional General Hospital, there were 76 postpartum mothers in 2024, of whom only 5 used postpartum contraception with implants. From January to February 2025, there were 15 postpartum mothers recorded. Data from the Molibagu Community Health Center show that in 2023 there were 227 postpartum mothers, with 59 using family planning methods, 17 chose injectables, and 42 chose implants. In 2024, 234 postpartum mothers, only 46 used postpartum contraception: 3 used pills, 10 used injections, 32 used implants, and 1 underwent female sterilization (MOW).. This clearly shows a lack of interest in postpartum contraception, especially IUDs, at the Molibagu Community Health Center. Therefore, this study aims to determine the factors that influence the low interest in using postpartum contraception (IUD) in South Bolaang Mongondow Regency.

## METHODS

This study uses a non-experimental research design, using an analytical observational method with a cross-sectional approach. This study was conducted at the Molibagu Community Health Center and Bolaang Mongondow Regional Hospital from March 11, 2025, to April 21, 2025. Data were collected through accidental sampling based on predetermined inclusion and exclusion criteria. The research instrument was a structured questionnaire. Data are presented in frequency distribution tables and narrative form. The study population consisted of 63 postpartum mothers registered at the Molibagu Community Health Center and the Bolaang Mongondow Regional Hospital. A total of 32 postpartum mothers were selected as the study sample.

## RESULT AND DISCUSSION

### RESULTS

***Respondent Characteristics***

Table 1
Frequency Distribution of Respondents' General Data

| Variables | N | (%) |
|---|---|---|
| Respondent Age | | |
| High risk age (<20 years and >35 years) | 10 | 31.3 |
| Age is not at high risk (20 years to 35 years) | 22 | 68.7 |
| Total | 32 | 100 |
| Work | | |
| housewife | 30 | 93.8 |
| Working (Private/PNS) | 2 | 6.2 |
| Total | 32 | 100 |
| Parity | | |
| Primipara | 21 | 65.6 |
| Multipara | 10 | 31.3 |
| Grandemulti | 1 | 3.1 |
| Total | 32 | 100 |
| Education | | |
| Low | 15 | 46.9 |
| Tall | 17 | 53.1 |
| Total | 32 | 100 |

Source: Primary Data 2025

Based on Table 1, respondents in the high-risk age group (<20 years and >35 years) were 10 people (31.3%), while those in the non-high-risk age group were 22 people (68.7%). The majority werehousewives (30 people) (93.8%), with only 2 people (6.2%) employed either privately or as civil servants. Regarding parity, 21 respondents (65.6%) were primipara, 10 (31.3%) were multipara, and 1 (3.1%) was grandemultipara. In terms of education, 15 respondents (46.9%) had a low level of education, and 17 (53.1%) had a higher level of education

***Univariate Analysis***

**Interest in using contraception after IUD delivery**

Table 2
Distribution of Interest in Using Postpartum IUD Contraception, South Bolaang Mongondow Regency.

| Variables | N | (%) |
|---|---|---|
| Knowledge | | |
| Good | 16 | 50.0 |
| Enough | 16 | 50.0 |
| Not enough | - | - |
| Total | 32 | 100 |
| Husband's Support | N | (%) |
| Does not support | 15 | 46.9 |
| Support | 17 | 53.1 |
| Total | 32 | 100 |
| Information from Health Workers | N | (%) |
| Does not support | 10 | 31.3 |
| Support | 22 | 68.8 |
| Total | 32 | 100 |
| Cuktural Factors | N | (%) |
| Does not support | 13 | 40.6 |
| Support | 19 | 59.4 |
| Total | 32 | 100 |
| Interest in Using Postpartum Birth Control | N | (%) |
| No | 21 | 65.6 |
| Yes | 11 | 34.4 |
| Total | 32 | 100 |

Source: Primary Data (2025)

Based on table Table 2, half of the respondents (50.0%) demonstrated good knowledge about postpartum IUD contraception, while the remaining 50.0% had fair knowledgeresponse frequency is based on good and sufficient knowledge, each of which is 16 people (50.0%). Regarding husband's support, 17 respondents (53.1%) reported receiving support, while 15 (46.9%) did not. Information from health workers was adequate for 22 respondents (68.8%) and inadequate for 10 respondents (31.3%). Cultural factors were supportive for 19 respondents (59.4%) and not supportive for 13 respondents (40.6%). Interest in using postpartum IUD contraception was low, with only 11 respondents (34.4%) expressing interest and 21 respondents (65.6%) indicating no interest.As many as 17 people (53.1%) supported husbands and 15 people (46.9%) did not support them. Information from health and health staff supported by 22 people (68.8%) and did not support as many as 13 people (31.3%). Culture that supports as many as 19 people (59.4%) and does not support as many as 13 people (40.6%). There were 11 people (34.4%) interested in using contraception after IUD delivery and 21 people (65.6%) were not interested.

***Bivariate Analysis***

***Knowledge factors Influencing Interest in Postpartum IUD Use***

Table 3. Knowledge factors influence interest in using birth control after IUD copying

| Knowledge | Interest in using birth control after IUD copying | | | | | | P Value | OR (CI-95%) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Total | | | |
| | N | (%) | N | (%) | N | (%) | | |
| Good | 9 | 28.01.00 | 7 | 21.09 | 16 | 50.00.00 | | 0,077083333 |
| Enough | 2 | 06.03 | 14 | 43.08.00 | 16 | 50.00.00 | 0.009 | (0.19-0.659) |
| Not enough | 0 | 0 | 0 | 0 | 0 | | | |
| Total | 11 | 34.03.00 | 21 | 65.06.00 | 32 | 100 | | |

Based on table 3, the results of the analysis of the relationship between knowledge and interest in using Kae.gori IUD post-copy contraceptives were good for 9 people (28.1%), 2 people (6.3%) had good knowledge and 7 people (21.9%) had good knowledge but were not interested in using post-op IUD contraceptives (43.8%). not interested in birth control after IUD delivery. Chi square test statistical results. The p value = 0.009 means there is a significant relationship between knowledge and interest in using birth control after IUD delivery. The results of the statistical test showed that the 95% CI value was 0.19-0.659 and the OR value was 0.111 and which means that the opportunity for interest in using post-partum IUD contraception is greater.

***Husband's support factor influences interest in using post-IUD contraception***

Table 4. Husband's support factor influences interest in using post-IUD contraception

| Husband's Support | Interest in using birth control after IUD copying | | | | | | P Value | OR (CI-95%) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Total | | | |
| | N | (%) | N | (%) | N | (%) | | |
| Does not support | 2 | 06.03 | 13 | 40.06.00 | 15 | 46.09.00 | | 7,313 |
| Support | 9 | 28.01.00 | 8 | 25.00.00 | 17 | 53.01.00 | 0.019 | (1,249-42,819) |
| Total | 11 | 34.04.00 | 21 | 65.06.00 | 32 | 100 | | |

Based on table 4, the results of the analysis of husband's support with the interest in using post-IUD contraception, the category of supporting was 9 people (28.1%), the husband's support who supported the use of post-IUD contraception but was not interested was 2 people (6.3%). As well as not getting husband's support for the interest in using post-IUD contraception was 13 people (40.6%) and received support but was not interested was 8 people (25.0%). The results of the chi square test showed a p value = 0.019 which means there is a significant relationship between husband's support and the interest in using post-IUD contraception. From the results of the 95% CI value of 1.249-42.819 and the statistical results obtained an OR value of 7.313 where husband's support has a large opportunity to influence interest in post-IUD family planning.

***Counseling and informational factors provided by healthcare workers influence women's interest in using contraception after IUD removal.***

Table 5. Counseling and informational factors

| Information by Health Workers | Interest in using birth control after IUD copying | | | | | | P Value | OR (CI-95%) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Total | | | |
| | N | (%) | N | (%) | N | (%) | | |
| Does not support | 1 | 03.01 | 9 | 28.01.00 | 10 | 31.02.00 | 0.050 | 7,5 |
| Support | 10 | 31.03.00 | 12 | 37.05.00 | 22 | 68.08.00 | | (0.807-69.744) |
| Total | 11 | 34.04.00 | 22 | 65.06.00 | 32 | 100 | | |

Based on Table 5, which presents the analysis of counseling and information provided by healthcare workers, 10 respondents (31.3%) expressed interest in using contraception after having an IUD, while 12 respondents (37.5%) showed no interest despite receiving counseling

and information from healthcare workers. Furthermore, counseling and information provided supported health awareness but did not necessarily increase interest in contraceptive use after IUD removal among 9 respondents (28.1%), whereas 1 respondent (3.1%) showed interest but did not receive sufficient support. The chi-square test yielded a p-value of 0.050, indicating a statistically significant relationship between counseling/information provided by healthcare workers and the respondents' interest in using contraception after IUD removal. The 95% confidence interval (CI) ranged from 0.807 to 69.744, and the odds ratio (OR) was 7.50, suggesting that counseling and information delivered by healthcare workers increased the likelihood of contraceptive interest by approximately seven times compared to those who did not receive such information.

***Cultural factors influence the interest in using post-IUD contraception***

Table 6. Cultural factors influence

| Culture | Interest in using birth control after IUD copying | | | | | | P Value | OR |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Total | | | |
| | N | (%) | N | (%) | N | (%) | | |
| Does not support | 1 | 03.01 | 12 | 37.05.00 | 13 | 40.06.00 | 0.009 | 13,333 (1,434-123,989) |
| Support | 10 | 31.03.00 | 9 | 28.01.00 | 19 | 59.04.00 | | |
| Total | 11 | 34.04.00 | 21 | 65.06.00 | 32 | 100 | | |

Based on Table 6, the results of the cultural analysis in relation to the interest in using postpartum IUD contraception showed that 10 respondents (31.3%) received cultural support and were interested in using a postpartum IUD, while 1 respondent (3.1%) expressed interest but did not receive cultural support. In contrast, 9 respondents (28.1%) reported having cultural support but were not interested in using postpartum IUD contraception, and 12 respondents (37.5%) neither received cultural support nor expressed interest in its use.The statistical analysis revealed a 95% confidence interval (CI) of 1.434–123.989 and an odds ratio (OR) of 13.33, indicating that cultural factors were associated with a 13-fold higher likelihood of influencing women's interest in using postpartum IUD contraception. The chi-square test showed a p-value of 0.009, suggesting a statistically significant relationship between cultural factors and women's interest in adopting postpartum IUD contraception

## DISCUSSION

***Knowledge Factors Influencing Interest in Using Postpartum IUD Contraception***

Based on the results of the analysis, knowledge was found to significantly influence women's interest in using postpartum IUD contraception. Among respondents with good knowledge, 9 individuals (28.1%) expressed interest in using postpartum IUDs, while 7 respondents (21.9%) had good knowledge but were not interested. Meanwhile, 14 respondents (43.8%) with lower knowledge levels were not interested in using postpartum IUD contraception. The chi-square test yielded a *p*-value of 0.009, indicating a significant relationship between knowledge and interest in postpartum IUD use. The 95% confidence interval (CI) was 0.19–0.659, and the odds ratio (OR) was 0.111, suggesting that higher levels of knowledge substantially increased the likelihood of postpartum IUD use. The underlying assumption in this study is that prospective contraceptive acceptors generally possess above-average knowledge when selecting their preferred contraceptive methods. This assumption is supported by the respondents' educational background, where most had completed secondary or tertiary education, enabling them to understand the long-term benefits of various contraceptive methods. However, some

respondents with good knowledge were still not interested in postpartum IUD use, possibly due to personal perceptions or misconceptions about the insertion procedure. Anxiety and fear related to the insertion of a device

into the vagina may discourage some women from choosing this method.Knowledge provides individuals with the ability to evaluate and make informed choices by considering both advantages and disadvantages of each contraceptive method. Women with higher education levels tend to be more receptive to new ideas and innovations, and they are also more likely to limit the number of births compared to women with no or low education (6). Knowledge is the product of human perception or cognition of an object through sensory experiences. It can be acquired through personal experience, interpersonal communication, or information obtained from books, newspapers, mass media, and electronic media (7).This finding is consistent with the research conducted by Jumiati (2020), which involved 176 respondents. The study found that 15 respondents (8.5%) had insufficient knowledge, 74 respondents (42.0%) had moderate knowledge, and 87 respondents (49.4%) had good knowledge. According to Jumiati (2020), knowledge and understanding of the preparation and process of IUD insertion were still relatively limited, as several respondents reported fear and anxiety regarding the insertion procedure (8).

***Husband's Support Factor Influences Interest in Using Post-IUD Contraception***

Based on the analysis of the relationship between husband's support and women's interest in using post-IUD contraception, 9 respondents (28.1%) who received their husband's support were interested in using contraception, while 2 respondents (6.3%) received support but were not interested. In contrast, 13 respondents (40.6%) who did not receive support from their husbands were not interested, and 8 respondents (25.0%) who received support remained uninterested in using post-IUD contraception. The chi-square test produced a *p*-value of 0.019, indicating a significant association between husband's support and women's interest in post-IUD contraceptive use. The 95% confidence interval (CI) ranged from 1.249 to 42.819, with an odds ratio (OR) of 7.313, suggesting that husband's support increases the likelihood of interest in using post-IUD contraception by approximately seven times.The researchers assume that receiving support from one's husband reflects a sense of trust and shared decision-making within the couple. Such support ensures that the chosen contraceptive method is safe and appropriate, as the husband provides emotional encouragement and supervision by being involved in reproductive health decisions. Conversely, the absence of husband's support may stem from a lack of understanding about IUD contraception or limited time due to occupational commitments, preventing the husband from accompanying his wife during contraceptive consultations.The husband plays an important role as a source of social support in a woman's decision-making process regarding family planning (3).

Husband's support refers to the assistance, encouragement, and participation provided by the husband in helping his wife decide on and select a long-term contraceptive method (9). To strengthen male involvement in the Family Planning Program, the government has implemented several strategies in recent years. These include improving men's access to accurate information about family planning and reproductive health through community-based education and health promotion initiatives (10).Research by Hutasoit (2019) also supports these findings. Among respondents whose husbands did not provide support (n = 45), 43 women (74.1%) did not use IUD contraception, while only 2 women (3.4%) did. In contrast, among those whose husbands provided support (n = 13), 9 women (15.5%) used an IUD, and 4 women (6.9%) did not. The chi-square test yielded a *p*-value of 0.000, indicating a significant relationship between husband's support and IUD use at the Simasom Village Health Post, Pahae Julu District. According to Hutasoit (2019), husband's support strongly influences women's contraceptive decisions women who do not receive such support are more likely to avoid using an IUD compared to those who receive consistent spousal support.

***Counseling/Information Factors Influence Interest in Using Family Planning After IUD Removal***

Based on the analysis of counseling and information provided by healthcare workers, 10 respondents (31.3%) expressed interest in using post-IUD contraception, while 12 respondents (37.5%) were not interested. Additionally, 9 respondents (28.1%) received counseling and information support but remained uninterested, and 1 respondent (3.1%) showed interest but did not receive adequate counseling support. The chi-square test yielded a *p*-value of 0.050, indicating a significant relationship between counseling/information provided by healthcare workers and women's interest in using contraception after IUD removal. The 95% confidence interval (CI) was 0.807–69.744, and the odds ratio (OR) was 7.50, suggesting that the counseling and information delivered by health personnel increased the likelihood of contraceptive interest by approximately seven times.

The research assumes that the information and education services provided by healthcare facilities are designed to help clients make informed decisions appropriate to their personal circumstances. However, not all

information received is necessarily well understood or retained by clients, particularly when making decisions about contraception. This may be influenced by individual considerations and preferences. The findings also indicate that many prospective users prefer injectable or implant contraception over IUDs. Therefore, healthcare workers must provide ongoing, intensive counseling and education on family planning options, involving the husband or partner in the decision-making process to ensure shared understanding and acceptance.Information plays a critical role in shaping awareness and influencing contraceptive behavior. It refers to messages or statements communicated to the public that promote understanding and informed decision-making. In family planning services, communication, information, and education (CIE) activities are essential, as they allow health professionals to deliver accurate, comprehensive information about contraceptive methods. Such messages must be conveyed clearly so that the public can understand family planning (*Keluarga Berencana*) programs effectively (11).

Low responsiveness toward IUD use is often associated with misinformation or misconceptions regarding side effects, such as vaginal discharge, fever, chills, or general discomfort. Accurate information, when delivered effectively, can increase individuals' willingness to try contraceptive methods, particularly when related to health benefits. Information media—such as posters, videos, and digital materials—play a vital role in improving public access to accurate health information and in guiding the selection of appropriate contraceptive methods. Moreover, contraceptive use is influenced by knowledge levels, information exposure, and socioeconomic status (12).Research conducted by Nancy *et al.* (2022) supports this finding. Of the respondents studied, 46 women (47.1%) were exposed to IUD-related information, while 48 women (47.1%) reported limited exposure. Additionally, 54 women (52.9%) assessed the role of midwives in counseling as inadequate. The statistical analysis revealed a significant relationship between information exposure and IUD use ($p = 0.001$), which is lower than the significance level $\alpha = 0.05$. Further analysis showed an odds ratio (OR) of 7.621 and a 95% confidence interval of 2.341–24.803, indicating that respondents with limited exposure to information were approximately seven times less likely to use IUD contraception compared with those who were adequately informed (13).

***Cultural Factors Influence the Interest in Using Post-IUD Contraception***

Based on Table 4., the results of cultural analysis related to the interest in using postpartum IUD contraception showed that 10 respondents (31.3%) received cultural support and were interested in using postpartum IUDs, while 1 respondent (3.1%) expressed interest but did not receive cultural support. In contrast, 9 respondents (28.1%) received cultural support but were not interested, and 12 respondents (37.5%) neither received support nor expressed interest in using postpartum IUD contraception. The statistical analysis yielded a 95% confidence interval (CI) of 1.434–123.989 and an odds ratio (OR) of 13.333, indicating that cultural factors were associated with a 13-fold higher likelihood of influencing interest in using postpartum IUD contraception. The chi-square test showed a *p*-value = 0.009, confirming a significant relationship between culture and women's interest in post-IUD contraceptive use.The research assumes that cultural values strongly influence individual behavior and lifestyle choices. Daily behavior is often shaped by local customs and cultural norms that are transmitted across generations. This is reflected in the community's adherence to traditional beliefs, such as the saying *"many children bring many blessings."*

Cultural beliefs also affect the public's acceptance of reproductive health information; inaccurate or unverified information can still be trusted and guide decisions about contraception. The OR value of 13.333 in this study suggests that cultural norms and sexual behavior patterns can influence women's interest in postpartum contraceptive use up to thirteen times more than in those less affected by traditional views. Furthermore, family planning guidelines emphasize that contraceptive methods must be acceptable not only to clients but also to their partners and the broader cultural environment within the community (6).Research conducted by Nancy *et al.* (2022) supports these findings. The study examined the relationship between cultural factors and IUD use and found that among 55 respondents with negative cultural attitudes, 51 women (92.7%) did not use IUDs, while only 4 women (7.3%) did. The analysis revealed a *p*-value = 0.000, which is smaller than $\alpha = 0.05$, indicating a significant relationship between culture and IUD use. Further analysis showed an odds ratio (OR) = 7.225 with a 95% CI of 2.223–23.486, meaning that respondents with negative cultural attitudes were approximately seven times less likely to use IUD contraception compared to those with positive cultural attitudes (13).

## CONCLUSION

Based on the results of this study, there is a significant relationship between knowledge factors, husband's support, information provided by health workers, and cultural influences with the level of interest in using postpartum IUD contraception among postpartum women. These findings indicate that women with adequate knowledge, strong partner support, accurate information from healthcare providers, and positive cultural acceptance are more likely to show interest in using postpartum IUDs.Conversely, low levels of knowledge, limited husband involvement, misinformation, and restrictive cultural beliefs contribute to reduced acceptance and use of postpartum contraception. Strengthening education and counseling efforts, involving husbands in family planning decisions, and addressing cultural misconceptions are essential strategies to increase awareness and promote the utilization of postpartum IUD contraception among postpartum mothers.

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