

## Research Article

## Meta-Analysis: Effectiveness of Husband's Support for *Intrauterine Device* Choice in Indonesia

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### Abstract

*Intrauterine devices* are an effective form of long-term contraception. Interventions involving husband support are expected to increase the interest of women of childbearing age in choosing an *intrauterine device*. This study aims to determine the effectiveness of husband support in choosing an *intrauterine device* in Indonesia.

**Subjects and Methods:** A systematic review and meta-analysis were conducted using the PRISMA guidelines and the PICO model, including Population = women of childbearing age; Intervention = husband support; Comparison = no husband support; Outcome = choice of an *intrauterine device*. Articles were collected through a *Health Journal* database focused on Indonesia. The keywords used were: choice of IUD, husband support, Indonesia. A total of 11 articles met the inclusion criteria for the meta-analysis and were assessed using RevMan 5.3.

**Results:** A meta-analysis of nine provinces in Indonesia showed that women of childbearing age who received husband support in choosing an *intrauterine device* were 12.30 times more likely to choose an *intrauterine device* than those who did not receive husband support, and this effect was statistically significant (OR= 12.30; 95% CI= 8.03 - 18.83;  $p < 0.001$ ).

**Conclusion:** Husband support is highly effective in increasing the choice of an *intrauterine device* among women of childbearing age in Indonesia.

**Keywords:** Health Services, Indonesia, IUD Choice, Meta-analysis, Husband Support.



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## INTRODUCTION

Indonesia's accelerating population growth remains a problem, with the dependency ratio reaching 44.65% in 2023. This indicates that for every 100 Indonesians of productive age, they are not only supporting themselves but also supporting around 45 non-productive individuals (Ministry of Health of the Republic of Indonesia, 2021). The family planning program aims to achieve balanced population growth in Indonesia, encompassing religious, economic, and socio-cultural aspects, as an integrated part of the national development program. One way to achieve this is by controlling population growth through the use of contraception (BPS, 2024).

Contraceptives are devices used to regulate pregnancy and regulate the number of births (Utami et al., 2024). There are many types of contraceptives, including *intrauterine devices*. *Intrauterine device* is a contraceptive device inserted inside the uterus, has a long-term lifespan (5-10 years), and is effective in reducing the pregnancy rate by 0.6-0.8 pregnancies per 100 women (WHO, 2021); (Ministry of Health of the Republic of Indonesia, 2021). *Intrauterine Device* is a long-term contraceptive device, made of flexible plastic, installed in a woman's uterus (Ministry of Health of the Republic of Indonesia, 2021). Based on their content, IUDs are divided into two types: the Copper IUD, which does not contain the hormone progesterone, and the LNG IUD, which contains the hormone progesterone (*Levonorgestrel*). IUDs work by thickening the cervical mucus, thereby inhibiting the passage of sperm to the egg (fertilization). In addition to preventing pregnancy and being long-term, IUDs have the advantage of not interfering with sexual intercourse, not affecting the quality and production of breast milk, and can be used by women until menopause. After the IUD is removed, fertility can return quickly (Ministry of Health of the Republic of Indonesia, 2021).

The WHO recommends that every woman have the opportunity to choose the contraceptive method of her choice without discrimination, including emergency, short-term, long-term, and permanent methods. *Intrauterine devices* are a contraceptive option available to all women, including young women and nulliparous women. *Intrauterine devices* are widely used in developed countries (WHO, 2021).

Contraceptive use will be successful if there is cooperation between husband and wife, as well as trust between the couple. Forms of supportive interaction between husband and wife can include mutual acceptance and providing tangible assistance (Rahayu, 2023). Husband's support for the use of contraceptives is very influential, such as in choosing an *Intrauterine Devices* (Trianingsih et al., 2021). Support from a husband that can be given to a mother, such as: the husband seeks information about *Intrauterine Devices*, the husband suggests that you always have check-ups on time, the husband always provides positive motivation, the husband always supports his wife's decisions in making decisions, the husband always provides support if there are problems in using the device (Rahayu, 2023).

The use of modern contraceptives in Indonesia increased from 54.36% in 2023 to 55.13% in 2024, with the highest number of users in the 35-39 age range (60.31%).



Short-term contraceptives (injectables) were the most widely used (52.92%), while the use of long-term contraceptives, such as *intrauterine devices*, was 9.68%. This demonstrates a gap in contraceptive choice (BPS, 2024). To narrow the gap in contraceptive choice, husbands' support is crucial, particularly in supporting and making decisions about long-term family planning programs. Husbands often believe that choosing a contraceptive is a woman's responsibility, leading them to be more passive.

From several research results regarding husbands' support for the use of IUDs (Tulle et al., 2021) that there is a relationship between husband's support and IUD use ( $p=0.000$ ;  $OR=11.324$ ;  $CI\ 95\%=4.378-29.290$ ), (Delima et al., 2022)( $p=0.000$ ), (Rohmah et al., 2022)( $p=0.000$ ), (Sadullah & Rosdianah, 2022)( $p=0.001$ ;  $OR=4.026$ ;  $CI95\%=1.859-8.723$ ), and (Zakiah & Kurniati, 2023)( $p=0.030$ )

Previous studies have reported that husband support interventions are effective in increasing the choice of *intrauterine devices* (IUDs), but the results have not shown consistent results. Further analysis is needed to draw more convincing conclusions. Researchers are interested in conducting research on the effectiveness of husband support in the choice of IUDs using a systematic review approach that combines relevant research from various studies in Indonesia and conducts a meta-analysis. This study aims to determine the effectiveness of husband support in the choice of *intrauterine devices*.

## METHOD

The method used in this study is a systematic review and meta-analysis with secondary data (results of previous research) in 2018 to 2023. Articles were collected through databases such as: *Journal of Mental Nursing*, *Journal of Social Psychology*, *MIDPRO Journal*, *Indonesia Midwifery and Health Sciences Journal*, *Scientific Journal of Batanghari Jambi University*, *Aisyah Journal: Journal of Health Sciences*, *Tambusai Health Journal*, *Midwifery Journal*, *Journal of Health Research*, *Journal of Holistic Health*, *Journal of Nursing Practice and Education*. Keywords used: selection of *Intrauterine Devices*, husband's support, Indonesia. Measurement scale: categorical. The analysis of this study was carried out using Review Manager 5.3 software. Data analysis was carried out by:

- a. The research problem is formulated using PICO, such as: Population = women of childbearing age; Intervention = husband's support; Comparison = no husband's support; Outcome = IUD selection
- b. Searching literature from electronic databases such as secondary data from previous research results. Articles were collected through databases such as: *Journal of Mental Health Nursing*, *Journal of Social Psychology*, *MIDPRO Journal*, *Indonesia Midwifery and Health Sciences Journal*, *Scientific Journal of Batanghari Jambi University*, *Aisyah Journal: Journal of Health Sciences*, *Tambusai Health Journal*, *Midwifery Journal*, *Journal of Health Research*, *Journal of Holistic Health*, *Journal of Nursing Practice and Education*.
- c. Journal quality is assessed using the *Critical Appraisal checklist for Cross-Sectional*.



- d. The research results from several researchers were combined using Review Manager 5.3 to calculate OR, CI95%, and ( $I^2$ ).
- e. The results that have been analyzed are then interpreted and conclusions are drawn.

## RESULT AND DISCUSSION

### a) Journal Search

Journal search through journal databases, such as: *Journal of Mental Health Nursing*, *Journal of Social Psychology*, *MIDPRO Journal*, *Indonesia Midwifery and Health Sciences Journal*, *Scientific Journal of Batanghari Jambi University*, *Aisyah Journal: Journal of Health Sciences*, *Tambusai Health Journal*, *Midwifery Journal*, *Journal of Health Research*, *Journal of Holistic Health*, *Journal of Nursing Practice and Education*. The time range used is 2018 to 2023, with keywords: husband support, use of *Intrauterine Devices*, Indonesia. The article search process with PRISMA flowchart can be seen in the image below:

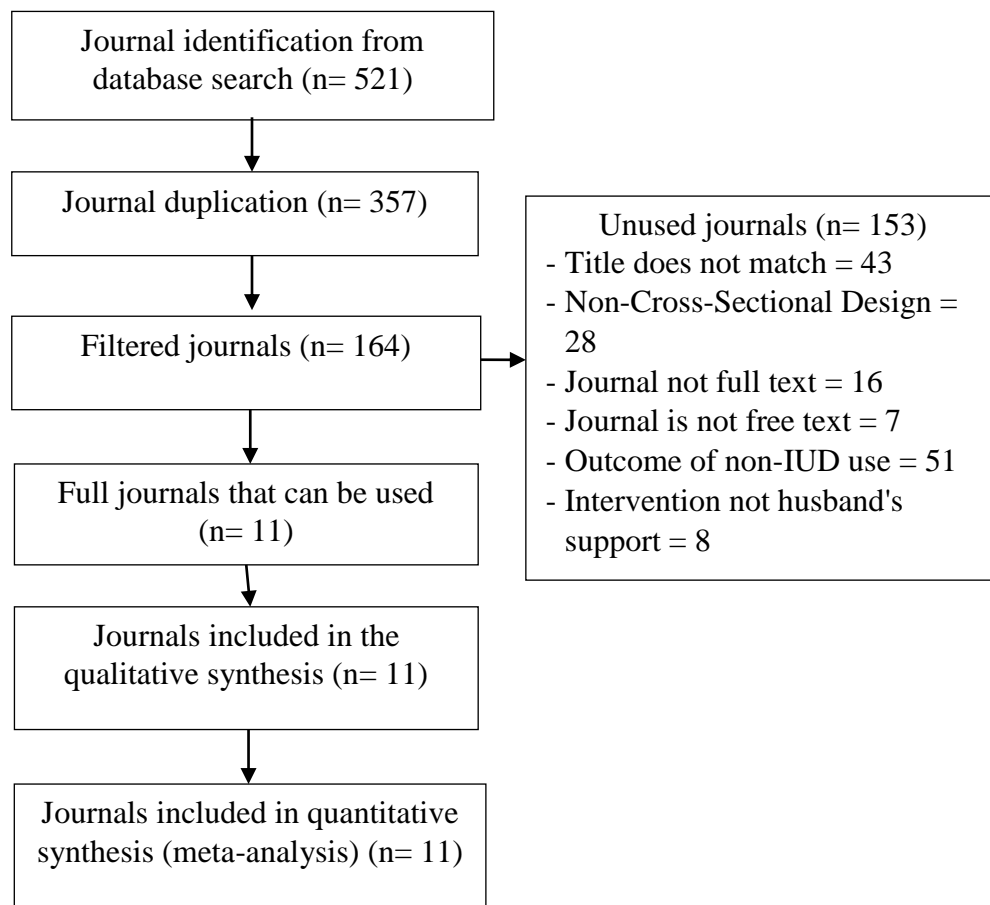


Figure 1. PRISMA flow diagram

Figure 1 shows the initial search stage, there were 513 research journals, the removal of duplicate published journals resulted in 164 journals, then an assessment was carried out on journals that were deemed suitable and there were 11 journals that could be reviewed in full text.



## b) Journal Quality Assessment

Table 1. Assessment of the quality of the Cross-Sectional journal "effectiveness of husband support in choosing an *intrauterine device* in Indonesia"(CASP, 2024).

No	Name and Year	Question											Amount
		1	2	3	4	5	6	7	8	9	10	11	
1	Mularsih et al., 2018	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
2	Mulyani et al., 2019	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
3	Sudirman & Herdiana, 2020	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
4	Sihombing et al., 2020	2	2	2	2	2	1	2	2	2	2	2	<b>21</b>
5	Tulle et al., 2020	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
6	Trianingsih et al., 2021	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
7	Satria et al., 2022	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
8	Delima et al., 2022	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
9	Rohmah et al., 2022	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
10	Zakiyah & Kurniati, 2023	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>
11	Sadullah & Rosdianah, 2020	2	2	2	2	2	2	2	2	2	2	2	<b>22</b>

Table 1 shows the quality scores for each journal. One journal covers very few subjects. Assessment Instructions: Answer Yes = 2, Answer No = 1, Answer Can't tell = 0

- 1) Does the research address a clearly focused issue?
  - 2) Did the researchers use the right methods to answer their questions?
  - 3) Were the subjects recruited in an acceptable manner? How did it go?
  - 4) Are measurements taken accurately to reduce bias?
  - 5) Was the data collected in a way that addressed the research problem?
  - 6) Did the researcher have enough participants to minimize fraud?
  - 7) How are the results presented and what are the main results?
  - 8) Is the data analysis rigorous enough?
  - 9) Is there any statement found clearly?
  - 10) How valuable is the research?
- c) Data analysis

There are 11 articles with a cross-sectional design used as a source for the meta-analysis of the effectiveness of husband support in choosing an *intrauterine device* in Indonesia.

Table 2. PICO of primary journals used in meta-analysis using cross-sectional design

Writer Year, Province	Total Sample	Populatio n	Intervention	Comparison	Outcome
Mularsih et	68	Husband	Using an IUD	Not using an	Knowledge (p= 0.000),



al., 2018. Central Java				IUD	Husband's support (p= 0.175)
Mulyani et al., 2019. East Java	273	Husband	Using an IUD	Not using an IUD	Husband's support (p= 0.000, OR= 61.18)
Sudirman & Herdiana, 2020. West Java	43	Husband	Using an IUD	Not using an IUD	Husband's Support (p= 0.881; OR= 3.76)
Sihombing, 2020. North Sumatra	24	Husband	Using an IUD	Not using an IUD	Husband's support for choosing IUD contraception (p= 0.009)
Tulle et al., 2020. East Nusa Tenggara	104	Husband	Using an IUD	Not using an IUD	Knowledge (p= 0.001), Husband's support (p= 0.000, OR= 11.324, CI 95%= 4.378-29.290)
Trianingisih et al., 2021. Jambi	38	Husband	Using an IUD	Not using an IUD	Role of Health Workers (p= 0.001; OR=35.00) Knowledge (p=0.002; OR=17.33), Husband's support (p=0.000; OR=98.00)
Satria et al., 2022. Jambi	169	Husband	Using an IUD	Not using an IUD	Knowledge (p= 0.005; OR= 12.821), Husband's support (p= 0.027; OR= 10.261), Attitude (p= 0.009; OR= 0.065)
Delima et al., 2022. West Sumatra	50	Husband	Using an IUD	Not using an IUD	Husband's support (p= 0.000)
Rohmah et al., 2022. West Java	45	Husband	Using an IUD	Not using an IUD	Husband's support (p= 0.000)
Zakiah & Kurniati, 2023. Central Java	51	Husband	Using an IUD	Not using an IUD	Factors in choosing IUD contraception: education (p= 0.001), knowledge (p= 0.001) and husband's support (p= 0.03)
Sadullah & Rosdianah, 2023. West Java	120	Husband	Using an IUD	Not using an IUD	Knowledge (p= 0.024; OR= 2.510; CI95%= 1.189-5.296), Husband's support (p= 0.001; OR= 4.026; CI95%= 1.859-8.723)

Based on Table 2 PICO primary journals on the effectiveness of husband support in choosing an *intrauterine device* in Indonesia, a meta-analysis of 11 articles was conducted between 2018 and 2023, randomizing 985 women of childbearing age (WUS) across 9 provinces in Indonesia, namely North Sumatra, Jambi, West Sumatra, West Java, Central Java, East Java, and East Nusa Tenggara. Similarities were found in the studies, namely the population was women of childbearing age, the intervention was husband's support, while the comparison was no husband's support, and the



outcome was the use of *intrauterine device* however, there is a difference in the number of samples, namely the minimum number is 24 and the maximum is 273.

Table 3. Primary journal results on the effectiveness of husband support in choosing an *intrauterine device* in Indonesia

Author, Year	Odds Ratio	Confidence Interval 95%	
		Lower	Upper
(Mularsih et al., 2018)	5.83	0.31	108.66
(Mulyani et al., 2019)	295.00	61.18	1422.44
(Sudirman & Herdiana, 2020)	3.76	0.13	110.72
(Sihombing, 2020)	22.00	2.05	236.05
(Tulle et al., 2021)	11.32	4.38	29.29
(Trianingsih et al., 2021)	98.00	7.73	1241.77
(Satria et al., 2022)	10.26	1.12	94.25
(Delima et al., 2022)	18.29	4.11	81.39
(Rohmah et al., 2022)	51.70	2.82	949.16
(Zakiah & Kurniati, 2023)	6.93	1.12	94.25
(Sadullah & Rosdianah, 2022)	4.03	1.86	8.72

Table 3 shows the results of the Odds Ratio (OR) and 95% Confidence Interval (95% CI) regarding the effectiveness of husband support in choosing an *intrauterine device* in Indonesia, that there is a difference between the 11 primary research results, namely Odds Ratio 3.76 - 295.00, Lower Confidence Interval 95% = 0.13 - 61.18 and Upper Confidence Interval 95% = 8.72 - 1422.44.

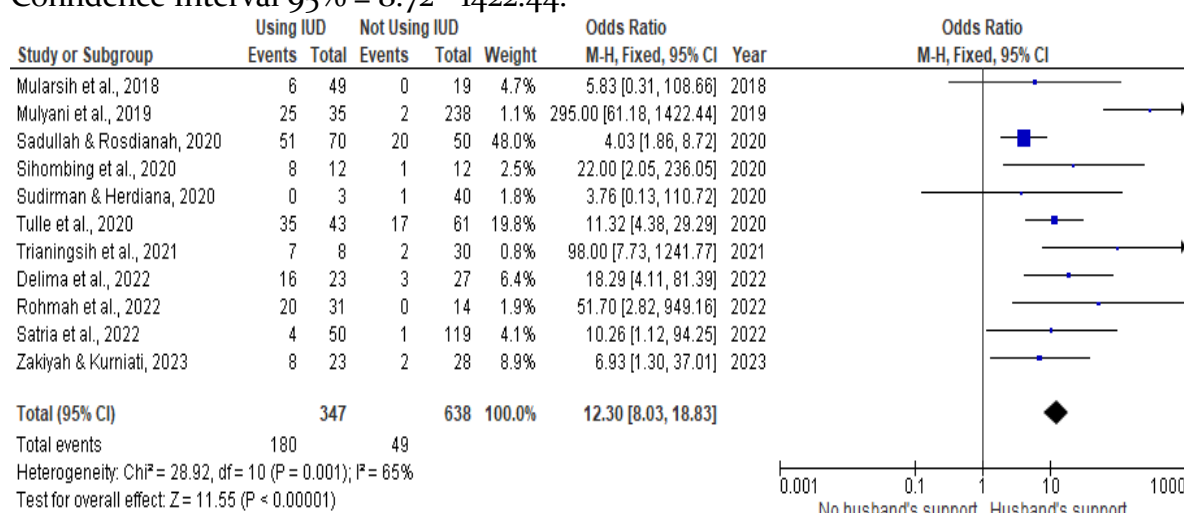


Figure 3. Forest plot meta-analysis of the effectiveness of husband support in choosing an *intrauterine device* in Indonesia

Forest plot figure 3, which uses a cross-sectional design, it shows that there is an influence of the effectiveness of husband support in choosing an *intrauterine device* in Indonesia, fertile couples who receive support from their husbands are more likely to



choose *Intrauterine Device* 12.30 times compared to not receiving husband support and the effect is significant ( $OR = 12.30$ ;  $95\% CI = 8.03 - 18.83$ ;  $p < 0.001$ ) and there is high heterogeneity in effect estimates between studies ( $I^2 = 65\%$ ;  $p = 0.001$ ). Therefore, the calculation of the effect used is the *Random Effect Model* ( $I^2$ )

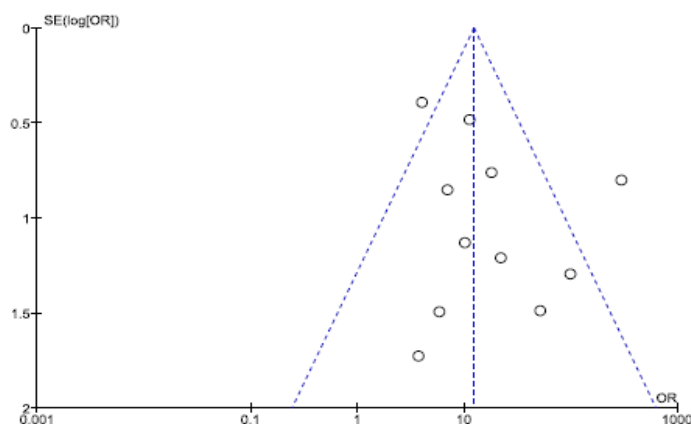


Figure 4. Funnel plot of meta-analysis of the effectiveness of husband support in choosing an *intrauterine device* in Indonesia

*Funnel plot* figure 4, shows that the distribution of estimated effects is the same on the right and left sides of each vertical line. Therefore, the funnel plot indicates no publication bias.

### c) Discussion

Based on the research results from 11 journals with a total of 985 respondents, fertile couples who receive support from their husbands have the possibility to choose *Intrauterine Device* 12.30 times compared to not getting husband's support and the effect was significant ( $OR = 12.30$ ;  $CI_{95\%} = 8.03 - 18.83$ ;  $p < 0.001$ ,  $I^2 = 65\%$ ). This shows that in planning a married life, the husband's support is very important.

The husband, as the head of the family, is the first person to provide encouragement to his wife before anyone else can provide support and attention (Dagung, 2002) in (Mariati, 2018). Husband's support can also be in the form of motivating his wife when making the decision to use contraception (Dahniar, 2020). It is the husband's responsibility to support the family planning program, including participating in family planning and practicing safe and healthy sexual relations for himself, his wife, and the family. Husbands can provide support in two ways: 1) directly, through the use of a type of contraception such as a vasectomy, coitus withdrawal, a calendar, or condoms. 2) indirectly, through supporting their partner in choosing the desired contraceptive method (Ministry of Health of the Republic of Indonesia, 2021).

The results of this study are also in line with (Habibi et al., 2022), that there is a relationship between husband's support and the choice of contraceptives in the Kuta Alam Banda Aceh Community Health Center Work Area in 2022 ( $p = 0.000$ ). (Mulyani et al., 2019) that husband's support has an influence on the use of *Intrauterine Device*



contraception ( $p= 0.000$  and  $OR= 61.80$ ). Other research was also conducted by (Satria et al., 2022), there is a relationship between knowledge ( $p= 0.015$ ;  $OR= 12.82$ ), husband's support ( $p= 0.027$ ;  $OR= 10.26$ ), and attitude ( $p= 0.009$ ;  $OR= 0.065$ ) with the use of IUD in Sukapindah Village.

## CONCLUSION

Husband's support has been shown to increase voting choices *Intrauterine Device* in women of childbearing age in Indonesia. The results of the study show that women of childbearing age who receive support from their husbands are more likely to choose *intrauterine device* 12.30 times more likely to receive support from their husbands than those without support, and this effect was significant ( $OR= 12.30$ ; 95%  $CI= 8.03 - 18.83$ ;  $p< 0.001$ ,  $I^2 = 65\%$ ). However, further research is needed to identify other factors that are effective in increasing marital choice *intrauterine device*.

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