

The Relationship Between Postpartum Family Planning Counseling and Postpartum Use of Modern Contraception in Indonesia: An Analysis of the 2022 SDKI

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ABSTRACT

Postpartum family planning counseling is an important intervention for increasing the use of modern contraception and preventing unintended pregnancies. However, evidence regarding the relationship between acceptance of postpartum family planning counseling and the use of modern contraception at the population level in Indonesia remains limited. This study aims to analyze the relationship between the receipt of postpartum FP counseling and the use of modern contraception after childbirth in Indonesia in 2022. This study employed an analytical observational design using a cross-sectional approach based on aggregated secondary data at the provincial level (ecological study). Data were obtained from the 2022 Indonesia Demographic and Health Survey (IDHS), with the 34 provinces of Indonesia serving as the units of analysis. Data analysis was performed using the Shapiro–Wilk normality test and Spearman’s correlation test. The results showed that the average rate of postpartum family planning counseling acceptance was 75.31% (SD = 8.83), while the average rate of postpartum modern contraceptive use was 69.55% (SD = 12.70). There was a statistically significant positive association between receiving postpartum family planning counseling and the use of modern contraception after childbirth ($r = 0.390$; $p = 0.023$). The higher the percentage of women receiving postpartum family planning counseling in a province, the higher the tendency to use modern postpartum contraception, although the strength of the association is classified as weak to moderate. Thus, efforts to increase the coverage and quality of postpartum family planning counseling need to be optimized as part of efforts to increase the use of modern contraception, accompanied by improved access to family planning services and support for other factors that influence contraceptive choice.

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1. INTRODUCTION

The postpartum period is a time when women are vulnerable to unplanned pregnancies because fertility can return before a mother realizes it, while the interval between births is often not yet safe enough for her body. The World Health Organization recommends a minimum interval of 24 months between one birth and the next pregnancy to reduce the risk of maternal and perinatal complications. This recommendation is supported by a recent systematic review and meta-analysis in the Asia-Pacific region, which shows that short birth intervals are associated with an increased risk of low birth weight, preterm birth, and neonatal death, with consistent patterns across various countries, including Indonesia (Hassen et al., 2024). Therefore, postpartum family planning is a key strategy to help women space their pregnancies by using contraception starting during the postpartum period—even before menstruation and fertility return to normal.

The use of modern contraception in Indonesia still faces various challenges in meeting postpartum family planning needs. An analysis of data from the Indonesian Demographic and Health Survey shows that women with low levels of education, living in rural areas, and from lower economic groups tend to rely more on traditional contraceptive methods or do not use contraception at all. These conditions indicate that Communication, Information, and Education (CIE) as well as access to contraceptive services still need to be strengthened, especially among more vulnerable groups (Fatmawati & Martha, 2022). Furthermore, high rates of contraceptive discontinuation and low use of Long-Acting Contraceptive Methods (LACMs) increase the risk of another pregnancy before the recommended birth spacing is achieved. Gaps in knowledge regarding the right to delay or limit pregnancies also contribute to the persistently high unmet need for family planning among women of reproductive age (Harzif et al., 2022).

Postpartum family planning counseling is an intervention that plays a crucial role in increasing the use of modern contraception. A recent meta-analysis across various low- and middle-income countries shows that women who receive family planning counseling are more likely to use modern contraception in the postpartum period than those who do not receive counseling (Khan et al., 2024). Counseling is determined not only by its availability but also by the quality of its delivery. Client-centered counseling—which provides information on method options, side effects, and the alignment of methods with women's reproductive goals—has been shown to support better decision-making compared to a one-way educational approach (Bullington et al., 2022; Khan et al., 2024).

In addition, providing repeated counseling at various maternal health care points results in a greater increase in contraceptive use compared to counseling provided only once (Atukunda et al., 2021; Puri et al., 2021). These findings are consistent with research conducted in Indonesia. A study in Kediri showed a significant difference in postpartum contraceptive use between the group that received counseling and the group that did not ($p = 0.007$) (Sari et al., 2022). Similarly, a quasi-experimental study in Cirebon reported that mothers who received counseling using a decision-making aid were 2.4 times more likely to use postpartum contraception than mothers who received only a conventional information sheet (Nurcahyani et al., 2023).

At the national level, Indonesia still faces regional disparities in meeting postpartum family planning needs. According to the 2022 Indonesia Demographic and Health Survey (IDHS), there are variations in the acceptance of postpartum family planning counseling and the use of modern postpartum contraceptives across provinces in Indonesia, indicating differences in service coverage and contraceptive use across various regions (BPS, 2023). In addition, women in eastern

Indonesia and in areas with limited access to health services face greater barriers in terms of knowledge and access to services compared to women in Java and Bali, resulting in a higher concentration of unmet family planning needs among these groups (Harzif et al., 2022).

One factor believed to contribute to this variation is the use of postpartum family planning counseling. However, the available evidence in Indonesia is still dominated by small-scale studies, such as the study by Sari et al., (2022) in Kediri, which involved 32 respondents, and the quasi-experimental study in Cirebon by Nurcahyani et al., (2023). Although these studies indicate that counseling can increase postpartum contraceptive use, the results do not yet illustrate the relationship between acceptance of postpartum family planning counseling and the use of modern contraceptives at the national population level. Furthermore, evidence regarding variations in this relationship across provinces using nationally representative survey data remains limited. Given these gaps, this study aims to analyze the relationship between the receipt of postpartum family planning counseling and the use of modern postpartum contraception in Indonesia in 2022.

2. METHOD

This study is a quantitative study with an analytical observational design using a cross-sectional approach based on aggregated provincial-level secondary data (ecological study). The cross-sectional approach is appropriate for analyzing the relationship between exposure factors and outcomes at the same point in time and is widely used in studies that utilize national-scale survey data (Muharram et al., 2025). The research data were obtained from the 2022 Indonesia Demographic and Health Survey (IDHS), which has national coverage down to the provincial level (IDHS, 2022). The units of analysis for this study were the 34 provinces in Indonesia in 2022. The independent variable was postpartum family planning counseling, measured as the percentage of mothers who received postpartum family planning counseling in each province, while the dependent variable was postpartum modern contraceptive use, measured as the percentage of postpartum modern contraceptive use for the last child in each province. All provinces in Indonesia were included in the study sample using total sampling. Data analysis was performed using IBM SPSS Statistics version 26, which included univariate analysis, the Shapiro–Wilk normality test (since the sample size was less than 50), and Spearman’s correlation test (since the data were not normally distributed).

3. RESULTS AND DISCUSSION

Family planning counseling integrated into maternal health services has been found to be associated with increased use of modern contraception after childbirth. A meta-analysis shows that women who receive family planning counseling are 2.75 times more likely to use modern contraception during the postpartum period than women who do not receive such counseling (Khan et al., 2024). This indicates that counseling plays a crucial role in improving knowledge, aiding decision-making, and encouraging the selection of contraceptive methods that are appropriate for the mother’s needs and condition after childbirth. In Indonesia, contraceptive use is still dominated by short-term methods such as injections and pills, while the use of long-acting reversible contraceptives (LARCs) is relatively lower (Maftuha et al., 2022; Nanda, 2023). This situation indicates that efforts to increase contraceptive use should not only focus on coverage but also on selecting effective and appropriate methods through high-quality counseling. Based on this background, this study analyzes the relationship between receiving postpartum family planning counseling and the use of modern contraceptives after childbirth in Indonesia in 2022. The study results are presented in the following tables and figures.

Table 1. Percentage of Postpartum Family Planning Counseling Recipients and Postpartum Modern Contraceptive Use by Province in Indonesia in 2022

Province	Postpartum Family Planning Counseling Services (%)	Postpartum Use of Modern Contraception (%)
Aceh	64,36	67,89
North Sumatra	67,08	53,93
West Sumatra	68,68	56,25
Riau	73,44	66,91
Jambi	71,06	84,79
South Sumatra	77,19	77,87
Bengkulu	72,79	70,59
Lampung	83,91	81,09
Bangka Belitung Islands	77,99	81,98
Riau Islands	77,46	70,4
Special Capital Region of Jakarta	92,18	69,38
West Java	80,75	81,84
Central Java	81,48	71,26
Special Region of Yogyakarta	73,7	58,49
East Java	84,46	79,71
Banten	79,72	83,09
Bali	88,48	52,62
West Nusa Tenggara	79,64	81,53
East Nusa Tenggara	77,15	51,6
West Kalimantan	68,78	81,51
Central Kalimantan	68,64	82,62
South Kalimantan	83,87	87,57
East Kalimantan	81,88	71,87
North Kalimantan	83,86	65,04
North Sulawesi	83,18	78,43
Central Sulawesi	78,97	73,51
South Sulawesi	73,3	66,68
Southeast Sulawesi	61,57	57,59
Gorontalo	80,87	79,15
West Sulawesi	68,62	59,94
Maluku	62,76	59,56
North Maluku	75,23	72,42
West Papua	69,6	58,76
Papua	47,74	28,71

Table 1 shows that there was considerable variation in the percentage of women receiving postpartum family planning counseling and using modern contraception across provinces in Indonesia in 2022. The percentage of postpartum family planning counseling coverage ranged

from 47.74% to 92.18%, while the use of modern contraceptives ranged from 28.71% to 87.57%. DKI Jakarta had the highest counseling coverage (92.18%), while Papua had the lowest (47.74%). Meanwhile, the highest rate of modern contraceptive use was found in South Kalimantan (87.57%) and the lowest in Papua (28.71%). These variations indicate that the implementation of postpartum family planning programs in Indonesia has not been uniform. High counseling coverage in some provinces is not always accompanied by high rates of modern contraceptive use. For example, DKI Jakarta has the highest counseling coverage, yet its use of modern contraceptives remains lower than in several other provinces, such as South Kalimantan and Banten, while Papua shows the lowest levels for both indicators.

Differences in family planning achievements across provinces may be influenced by the interaction of various factors, such as the availability of health services, the quality and distribution of health workers, as well as educational and economic disparities that affect women's ability to access and use contraception (Lima et al., 2025). Furthermore, variations in the implementation of family planning programs across regions can mean that high rates of counseling uptake do not necessarily translate into equally high rates of modern contraceptive use (Kusumastuti et al., 2025; Wawai et al., 2025). This finding aligns with research by Mukti & Prabawa (2024), which demonstrates spatial variations in family planning program outcomes in Indonesia, as well as a study by Al-Husban et al., (2022), which reported that women's decisions to use modern contraceptives are also influenced by experiences with side effects, service costs, partner support, and the social environment; thus, counseling alone may not necessarily result in contraceptive use if these factors are not addressed.

Table 2. Descriptive Statistics for the Research Variables

Variable	Mean $\pm$ SD	Median	Min–Max
Postpartum Family Planning Counseling (%)	75,31 $\pm$ 8,83	77,17	47,74–92,18
Use of Modern Contraception (%)	69,55 $\pm$ 12,70	70,93	28,71–87,57

Furthermore, Table 2 shows that the average rate of postpartum family planning counseling in Indonesia in 2022 was 75.31% (SD = 8.83), while the average rate of modern contraceptive use after childbirth was 69.55% (SD = 12.70). The median values, which are relatively close to the mean for both variables, indicate that the distribution of data across provinces tends to be balanced and is not dominantly influenced by extreme values. Nevertheless, the fairly wide range between the minimum and maximum values suggests variation in the rates of postpartum family planning counseling uptake and modern contraceptive use across provinces. This variation indicates that the implementation of postpartum family planning programs and the use of modern contraceptives have not yet been evenly distributed across all regions of Indonesia. These differences in achievement among provinces may reflect variations in access to health services, the quality of counseling delivery, and the social and demographic characteristics of the population that could potentially influence the use of modern contraceptives.

The fact that acceptance of postpartum family planning counseling is higher on average than the use of modern contraception indicates that acceptance of counseling is not always followed by a decision to use modern contraception. This finding is consistent with the meta-analysis by Khan et al., (2024), which shows that counseling increases the likelihood of modern contraceptive use but is not the sole factor determining the decision to use contraception. In Indonesia, research also shows that counseling plays a greater role in increasing knowledge and aiding decision-making than in directly increasing the use of modern contraception (Setiawati, 2024). This

difference suggests that the decision to use modern contraception is influenced by various other factors, such as spousal support, the quality of counseling, and access to family planning services. Spousal support is known to play a crucial role in encouraging women to use postpartum contraception (Ramadiyanti & Sofiyanti, 2025). In addition, limited counseling time and the quality of health services can also reduce the effectiveness of counseling in promoting behavioral change (Kusuma et al., 2022). The relationship between acceptance of family planning counseling and the use of modern postpartum contraception is presented in Table 3.

Table 3. Relationship Between Family Planning Counseling and the Use of Modern Contraception Postpartum

Variable	r	p-value	Direction of the Relationship
Family Planning Counseling Modern Contraception	0,390	0,023	Positif

The results of the Spearman correlation test indicate a significant association between the receipt of postpartum family planning counseling and the use of modern postpartum contraception in Indonesia ($r = 0.390$; $p = 0.023$). The positive correlation coefficient indicates that the higher the percentage of women receiving postpartum family planning counseling in a province, the higher the tendency for postpartum modern contraceptive use in that province. However, the strength of the relationship is classified as weak to moderate. The findings of this study indicate that the receipt of postpartum family planning counseling is positively associated with the use of modern postpartum contraception at the provincial level in Indonesia. The relationship found is statistically significant, although its strength is still classified as weak to moderate. This suggests that the higher the coverage of counseling in a region, the greater the tendency to use modern contraception; however, counseling is not the only factor determining the decision to use contraception.

The results of this study are consistent with the meta-analysis by Khan et al. (2024), which showed that women who received family planning counseling were 2.75 times more likely to use modern contraception in the postpartum period than women who did not receive counseling. These findings are also supported by previous studies showing that counseling provided repeatedly during maternal care is more effective at increasing consistent use of modern contraception than a single counseling session (Atukunda et al., 2021; Puri et al., 2021). However, the magnitude of the association in this study is relatively lower than that found in individual studies or the meta-analysis. This difference may be due to the unit of analysis used. This study used aggregated provincial-level data and was therefore unable to capture individual characteristics such as educational level, age, parity, partner support, quality of counseling, or availability of contraceptive methods—all of which are known to influence decisions regarding the use of modern contraception. These results are further supported by the distribution pattern shown in Figure 1, which indicates that several provinces exhibit characteristics that differ from the general pattern.

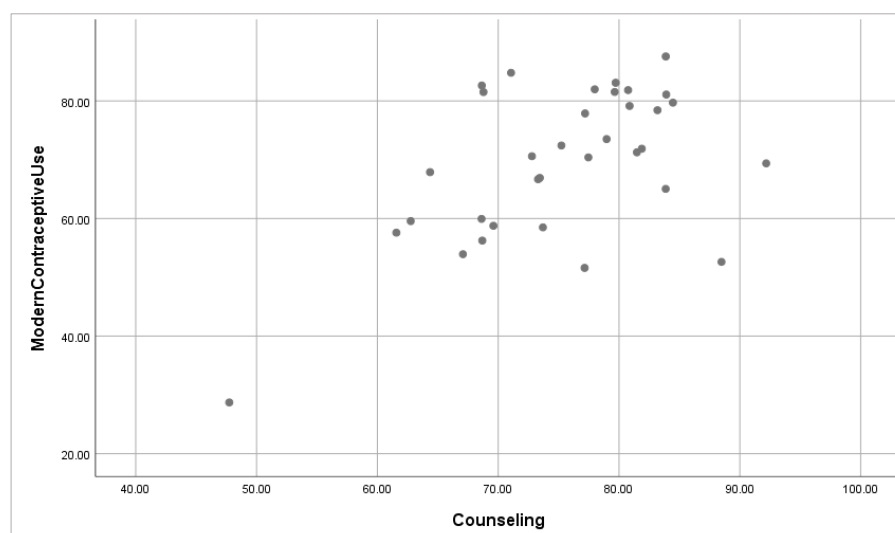


Figure 1. Scatter Plot Showing the Relationship Between Postpartum Family Planning Counseling and the Use of Modern Contraception in Indonesia in 2022

The distribution of data points in Figure 1 shows that several provinces deviate significantly from the general pattern. DKI Jakarta recorded the highest counseling coverage among all provinces (92.18%), but the use of modern contraception after childbirth reached only 69.38%. Bali shows an even sharper disparity, with a counseling coverage rate of 88.48%, but modern contraceptive use below the national average at 52.62%. In contrast, Papua is in a different situation, with the lowest rates for both variables: counseling coverage at 47.74% and modern contraceptive use at 28.71%. These findings indicate that the relationship between counseling uptake and modern contraceptive use is not always linear across all provinces. Such interregional variations are consistent with the findings of Mukti dan Prabawa (2024), who detected spatial clustering in family planning program outcomes in Indonesia and indicated that geographic factors, the equitable distribution of health facilities, and the availability of services contribute to differing patterns of outcomes across regions. Disparities in provinces such as DKI Jakarta and Bali also suggest that receiving counseling does not automatically lead to the use of modern contraception. A woman's decision to use contraception is still influenced by various other factors, such as the cost of services, experiences with side effects, support from a partner, and local social and cultural norms, as reported by Al-Husban et al. (2022) in a study on factors influencing the choice of long-acting contraceptive methods. Thus, increasing counseling coverage alone is not sufficient to promote the equitable use of modern contraception. Strengthening the quality of counseling, providing information tailored to women's needs, and ensuring equitable access to services and contraceptive method options must be prioritized, particularly in provinces that still exhibit significant disparities, such as DKI Jakarta, Bali, and Papua.

This study has several limitations. First, the cross-sectional design can only demonstrate the presence of an association between variables at a single point in time; therefore, it cannot explain the causal relationship between postpartum family planning counseling and the use of modern contraception. Second, the study used aggregated provincial-level data (an ecological study), so it could not evaluate the influence of individual characteristics—such as age, educational level, parity, spousal support, counseling quality, or socioeconomic factors—that could potentially influence the decision to use modern contraception. Third, the analysis used a correlation test, so

it was not able to control for confounding factors that might influence the relationship between the two variables. Nevertheless, this study provides an initial overview of the relationship between acceptance of postpartum family planning counseling and the use of modern contraception at the provincial level using representative national survey data. These findings are expected to serve as a foundation for future research using individual-level data and multivariate analysis to gain a more comprehensive understanding of the factors influencing the use of modern contraception after childbirth in Indonesia.

4. CONCLUSION

Postpartum family planning counseling is one of the key strategies in reproductive health care to support informed decision-making regarding appropriate contraceptive use. The results of this study indicate a positive association between the receipt of postpartum family planning counseling and the use of modern contraception after childbirth in Indonesia in 2022. The higher the percentage of women receiving postpartum family planning counseling in a province, the higher the tendency toward postpartum use of modern contraceptives, although the strength of this association remains weak to moderate. Thus, counseling contributes to increased use of modern contraceptives but is not the sole factor influencing contraceptive choice. Therefore, efforts are needed to improve the coverage and quality of postpartum family planning counseling, accompanied by equitable access to family planning services, the availability of contraceptive method options, and strengthened support from partners and families to increase the use of modern postpartum contraception in Indonesia.

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