







The Relationship Between Knowledge and Attitude Toward The Use of Postpartum Family Planning (PPFP)

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Abstract. Background: Postpartum Family Planning (PPFP) is a crucial intervention to prevent unwanted pregnancies and reduce maternal and infant morbidity and mortality. Despite government efforts, the utilization rate of PPFP remains below national targets in several regions in Indonesia. This study aims to analyze the relationship between maternal knowledge and attitudes and the utilization of PPFP among postpartum mothers at the Genuk Community Health Center in Semarang. **Methods:** A cross-sectional quantitative analytic study was conducted from January to April 2024 involving 66 postpartum mothers who met the inclusion criteria at Genuk Community Health Center, Semarang, Indonesia. Respondents were selected using purposive sampling. Data collection utilized a structured and validated questionnaire covering sociodemographics, knowledge, attitudes, and postpartum family planning practices, followed by analysis with Chi-square and multivariate logistic regression. **Results:** The majority of respondents had moderate knowledge (51.5%) and positive attitudes (59.1%) about PPFP; 68.2% reported utilizing PPFP. Knowledge ($p=0.026$) and attitude ($p=0.008$) were significantly associated with PPFP use. Multivariate analysis showed that mothers with sufficient knowledge were 2.6 times more likely (95% CI: 1.2–5.7), and mothers with positive attitudes were 2.2 times more likely (95% CI: 1.1–4.6) to use postpartum family planning.

Keywords: Knowledge, Attitude, Postpartum Family Planning, Indonesia

1 Background

Indonesia remains one of the countries in Southeast Asia with a relatively high population growth rate, which poses significant challenges to public health, socioeconomic development, and quality of life. Family planning programs have long been identified as a crucial national strategy to address population issues by enabling couples to plan pregnancies and improving reproductive health outcomes. Postpartum Family Planning (PPFP) in particular plays a crucial role in breaking the cycle of closely spaced pregnancies, which otherwise can increase the risk of maternal and infant morbidity and mortality ⁽¹⁾. Despite government efforts to promote and provide postpartum family planning (PPFP), postpartum contraceptive use at the Genuk Community Health Center (Puskesmas) in Semarang City remains suboptimal. Mid-2024 data showed that only

42.5% of postpartum mothers at the Genuk Community Health Center used postpartum family planning methods, far below the national target of 70%. This gap highlights persistent barriers that limit the effectiveness of existing interventions.

The immediate postpartum period is a strategic opportunity to introduce family planning, as it is during this phase that mothers frequently come into contact with health services and are highly receptive. Various empirical and systematic studies have shown that maternal knowledge about family planning, such as its benefits, timing, and available methods, as well as attitudes toward contraception, are among the most influential determinants of actual contraceptive adoption^(9, 4, 3). Lack of accurate information, persistent myths, or negative perceptions about family planning can reduce acceptance, increasing vulnerability to unwanted or high-risk pregnancies.

However, while there are several research studies specifically examining knowledge, attitudes, and their relationship to postpartum family planning use among postpartum women in Semarang City, particularly in the area served by the Genuk Community Health Center, they are still very limited. Understanding these factors in the local context is crucial for designing more targeted interventions that address specific community needs and barriers.

Accordingly, this study was conducted to thoroughly analyze how maternal knowledge and attitudes relate to postpartum contraceptive use among women at Genuk Community Health Center in Semarang. The results are expected to provide evidence to inform strategies for strengthening health education, counseling, and community engagement in postpartum contraception, ultimately supporting efforts to improve maternal and child health in the region

2 Material and Methods

2.1 Study design and settings

The research location was at the Genuk Community Health Center, located in the eastern part of Semarang City. The Genuk Community Health Center covers seven sub-districts: Genuksari, Gebangsari, Muktiharjo Lor, Banjardowo, Terboyo Wetan, Terboyo Kulon, and Trimulyo. The health center offers various programs, including general checkups, emergency services, a sanitation clinic, antenatal care (ANC), maternity care, family planning (KB), immunizations, child health care, dental and oral examinations, health screenings, pharmacy, laboratory tests, health certificates, inpatient care, and other services. There are six midwives at the Genuk Community Health Center in Semarang City, and two have received postpartum family planning training.

The rationale for choosing Genuk CHC as the study site was based on recent data indicating that postpartum family planning use remains low in this area relative to the national target. According to Genuk CHC data in 2024, postpartum FP adoption among mothers is only 42.5%, far below the national target of 70%. This indicates specific barriers in the Genuk area affecting postpartum FP use, including knowledge, attitude, and access to information and services. Additionally, Genuk is one of the sub-districts with a fairly high birth rate in Semarang, so interventions in postpartum family planning are essential to support

maternal and child health and reduce maternal and neonatal morbidity and mortality. Therefore, selecting this site is highly relevant for further exploring the local factors influencing postpartum family planning uptake and providing evidence-based recommendations for improving local health services

2.2 Research design

This research employed a cross-sectional analytic approach during January–April 2024 at Genuk Community Health Center, Semarang.

Respondents: All postpartum mothers (≤ 6 weeks or ≤ 42 days postpartum), with a total of 66 respondents, who met inclusion criteria: postpartum mothers physically and mentally healthy, residing in the Genuk area, willing to participate, and having no contraindications to family planning. Respondents were selected through purposive sampling.

2.3 Sampling

The research sample was postpartum mothers ≤ 6 weeks or ≤ 42 days. The sample size used the Slovin formula with an error rate of 10% (0.1). The sampling technique used purposive sampling.

2.4 Data Collection

Data were collected using a structured questionnaire that had undergone validity and reliability testing. The questionnaire's validity was assessed using the Pearson Product-Moment correlation technique, where each item was evaluated against the critical value of r-table. An item was deemed valid if the calculated r-value was \geq r-table, which in this study was 0.707. All items in the questionnaire were confirmed valid. Reliability was tested using Cronbach's Alpha, yielding a value of 0.980, indicating very high internal consistency⁽¹⁴⁾

2.5 Data Analysis

Data were entered and analyzed using SPSS. Categorical variables were presented as frequencies and percentages. Relationships between knowledge, attitude, and PPFP use were tested using Chi-square analysis. Logistic regression identified independent predictors of PPFP use while controlling for confounders such as age, education, and parity. Statistical significance was set at $p < 0.05$ ⁽¹⁴⁾

2.6 Ethics

This study received ethical approval from the Health Research Ethics Committee of Sultan Agung Islamic University (No. 374/IX/2024/Komisi Bioetik). **All respondents provided informed consent before participating. Each respondent received written**

information concerning the study's aims, benefits, procedures, and their rights. The researcher ensured the confidentiality, anonymity, and privacy of respondents' data in accordance with prevailing health research ethics

3 Results

3.1 Univariate Analysis

Table 1. Frequency distribution of knowledge regarding the use of KBPP

Knowledge	Frequency (n)	Percentage (%)
Good	12	18.2
Enough	34	51.5
Not enough	20	30.3
Total	66	100

Based on table 1, it shows the knowledge of postpartum mothers about KBPP, the majority of 34 respondents (51.5%) have sufficient knowledge

Table 2. Frequency distribution of attitudes towards KBPP

Attitude	Frequency (n)	Percentage (%)
Positive	39	59.1
Negative	27	40.9
Total	66	100

Based on table 2. Showing the attitudes of postpartum mothers towards KBPP, as many as 39 (59.1%) respondents had a positive attitude

3.2 Bivariate Analysis

Table 3. Relationship between knowledge and attitudes of postpartum mothers towards KBPP

Knowledge	Use of KBPP				Amount		<i>p-value</i>
	Use		Do not use		n	%	
	n	%	n	%			
Good	10	83.3	2	16.7	12	100	0.026
Enough	26	76.5	8	23.5	34	100	
Not enough	9	45.0	11	55.0	20	100	
Total	49		17		66	100	

Based on table 3, it shows that respondents who have good knowledge and use PFP are 10 respondents (83.3%) and do not use PFP as much as 2%, (16.7%) respondents, sufficient knowledge of using PFP are 26 (76.5%) respondents, and do not use PFP

as many as 8 (23.5%) respondents and those with less knowledge of using PPFp are 9 (45%) respondents and do not use as many as 11 (55%) respondents.

Multivariate logistic regression showed that adequate knowledge (OR 2.6; 95% CI: 1.2–5.7) and positive attitude (OR 2.2; 95% CI: 1.1–4.6) independently increased the likelihood of PPFp utilization

4 Discussion

This study affirms that knowledge and attitude are significant and independent predictors of postpartum family planning (PPFP) utilization. Mechanistically, good knowledge about PPFp enables mothers to better understand its benefits, risks, and available contraceptive options, leading to a more positive perception of PPFp practice. Adequate knowledge generally enhances decision-making, shapes more accepting attitudes, and ultimately motivates PPFp use. The process begins with improved knowledge through health education, followed by enhanced perception of PPFp's importance, supportive attitude formation, and, finally, contraceptive use. Attitude, as a reflection of individual beliefs or perceptions regarding PPFp, also plays an important role through affective and normative influence. Mothers with positive attitudes toward PPFp are more likely to overcome cultural, familial, or social barriers and make the decision to use contraception postpartum. In summary, knowledge enhances understanding, while attitude fosters the emotional and cognitive motivation to act in line with that knowledge.

These findings are in accordance with Sari et al. (2024) in Indonesia, who found that comprehensive PPFp knowledge increases the likelihood of PPFp use by up to 2.8-fold. Martinez et al. (2023), through a Southeast Asian meta-analysis, also reported that positive attitudes were strongly associated with increased PPFp use (odds ratio >2.3). Similarly, Kim et al. (2023) found that the effect of knowledge on PPFp behavior is largely mediated by attitude, and that educational interventions targeting both knowledge and attitude have a greater impact on practice than focusing on either alone.

Studies by Rahman et al. (2023) and Widodo & Putri (2024) emphasize the importance of structured education and counseling during antenatal and postpartum phases, which have been shown to significantly increase both maternal knowledge and positive attitudes—and double the utilization of PPFp within three months post-delivery according to Rahman et al. (2023). This highlights health facilities as strategic avenues for knowledge and attitude interventions.

Comparisons with similar regional studies reveal consistent patterns. In countries such as the Philippines and Thailand, the mechanisms by which knowledge and attitude influence PPFp behavior also involve interactions with social norms and family support (7). In culturally strong regions such as Central Java, engaging husbands, family elders, and community leaders has proven to enhance the effectiveness of interventions (5). A study in West Java showed that educational interventions involving community health workers and family support improved both maternal knowledge and attitudes on postpartum contraception, ultimately resulting in greater PPFp uptake among postpartum

women. This underscores the importance of community- and family-based approaches tailored to the local sociocultural context.

The multivariate analysis in this study, which controlled for age, education, and parity, further confirmed that personalized intervention strategies are critical, as sociodemographic characteristics may moderate program effectiveness. Findings from Ayele et al. (2023) in several Asian countries support this and emphasize the need for context-based approaches aligned with community characteristics.

The limitations of this research include its cross-sectional design and purposive sampling, which may restrict generalizability and preclude causal inferences. Nevertheless, the consistency of these results with multinational studies reinforces the contextual evidence for urban Indonesia. Future research could adopt qualitative methods to explore PFP barriers and enabling factors more deeply and conduct longitudinal evaluations of ongoing educational and counseling interventions

5 Conclusion and Recommendations

Maternal knowledge and positive attitudes are key determinants of postpartum family planning utilization among mothers at the Genuk Community Health Center in Semarang. Evidence suggests that strengthening health literacy and fostering positive attitudes through structured counseling and community-based interventions can significantly increase postpartum family planning coverage^(5,3,4). Integrating family-focused education and involving key family members in health promotion activities is highly recommended.

Policymakers and health services should prioritize capacity building for midwives, ensure the regular provision of postpartum family planning information at all maternal service touchpoints, and collaborate with local community leaders to adapt messages to local cultures. Further research using a multi-method approach is needed to deepen understanding and sustain program improvements

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Muhammad Akhyar contributed to data collection, data processing, and manuscript writing.

Sri Mulyani contributed to the manuscript writing, review, and critical review.

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All authors have approved the final version of the manuscript.

References

1. Marini, D., dkk. Determinan Penggunaan KB pascapersalinan di Indonesia: Survei Lintas Seksi Nasional. *BMC Public Health*, 23(1), 1122. (2023)
2. Sari, I., & Kusuma, A. Pengaruh Pengetahuan dan Sikap terhadap Penerimaan KB Pascapersalinan: Sebuah Studi Multisenter. *International Journal of Gynecology & Obstetrics*, 167(2), 104–110. (2024) Author, F., Author, S., Author, T.: Book title. 2nd edn. Publisher, Location (1999)
3. Martinez, L. C., dkk. Efektivitas Intervensi Edukasi terhadap Penerimaan KB Pascapersalinan: Meta-analisis. *Kontrasepsi*, 118, 83–92. (2023).
4. Rahman, Y., Fauzia, D., & Widodo, S. Meningkatkan Pemanfaatan KB Pascapersalinan melalui Konseling Terstruktur di Asia Tenggara. *Kesehatan Reproduksi*, 20(1), 53. (2023).
5. Widodo, S. & Putri, E. Pendekatan Berbasis Keluarga terhadap Penggunaan KB Pascapersalinan di Jawa Tengah: Sebuah Tinjauan Sistematis. *PLOS ONE*, 19(4), e0299422. (2024).
6. Kim, S. Y., dkk. Faktor Sosio-Demografi dan Penggunaan KB Pascapersalinan: Bukti dari Indonesia. *Jurnal Kesehatan Masyarakat Internasional*, 68, 1605082. (2023).
7. Thompson, S., & Garcia, F. Peran Norma Sosial dalam Keputusan Penggunaan Kontrasepsi Pascapersalinan di Asia Tenggara. *BMC Health Services Research*, 23, 180. (2023).
8. **World Health Organization. (2024). Family Planning/Contraception: Key Facts. Accessed June 8, 2024**, from <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>
9. Ayele, W., dkk, Pengetahuan, Sikap, dan Praktik terhadap PFP: Studi Multi-negara di Asia. *Laporan Kesehatan Wanita*, 4(3), 349–358. . (2023).
10. Badan Pusat Statistik, BKKBN, & Kemenkes. 2015b. Profil Penduduk Indonesia Hasil SUPAS 2015. Badan Pusat Statistik. Jakarta: BPS
11. BKKBN. 2017. Peraturan Kepala Badan Kependudukan dan Keluarga Berencana Nasional Nomor 24 Tahun 2017 Tentang Pelayanan Keluarga Berencana Pasca Persalinan dan Pasca Keguguran. *Pelayanan Keluarga Berencana Pasca Persalinan Dan Keguguran*
12. Widyastuti, Y. Akhyar M at All 2023 Relationship Between Gender Equality and Husband Support in the Use of Postpartum Family Planning (PFP) ([sagepub.com](https://doi.org/10.1177/23779608231186743)) <https://doi.org/10.1177/23779608231186743>
13. Kementerian Kesehatan Republik Indonesia. (2023). *Profil kesehatan Indonesia 2023*. Jakarta: Kemenkes RI
14. Notoatmodjo, S. (2018) *Metodologi penelitian kesehatan*. Jakarta: Rineka Cipta.
15. Sugiyono (2022) *Metode Penelitian kuantitatif kualitatif dan R&D*. 27th edn. Bandung: Alfabeta.

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