

The Relationship between Knowledge Level and Postpartum Contraceptive use Among Postpartum Mothers

Volume 1(1), 22-28
© The Author(s) 2025
<https://doi.org/10.xxxxx/hjns14>



Ni Putu Lilis Chandrawati^{1*}, Ni Luh Putu Dian Yunita Sari² ,
Komang Yogi Triana³ , I Gusti Ayu Ratih Agustini⁴
^{1,2,3,4}Bachelor of Nursing Study Program College of Health Sciences Bina Usada
Bali, Indonesia

ABSTRACT

Background: This study investigates the challenges related to postpartum contraceptive use among mothers, focusing on the critical role of knowledge in family planning decisions. Evidence shows that many women across different regions, including Indonesia, still fail to utilize postpartum contraception optimally, leading to significant health risks and economic burdens. Despite the availability of various contraceptive options, misconceptions and lack of awareness contribute to suboptimal use.

Objective: This study aimed to identify the key barriers to effective postpartum contraception use and assess the impact of knowledge on family planning choices. By exploring the factors that influenced decision-making, the study sought to provide recommendations for improving postpartum contraceptive uptake.

Methods: This study employed a cross-sectional design conducted at the Kerambitan II Community Health Center, Bali, Indonesia, from March to May 2024. A total sampling technique was used to include 50 postpartum mothers who met the inclusion criteria. Data were collected using structured questionnaires to assess demographic characteristics, knowledge levels, and contraceptive practices. Data were analyzed using descriptive statistics and the chi-square test to examine the relationship between knowledge levels and postpartum contraceptive use, with a significance level set at $p < 0.05$.

Results: The majority of postpartum mothers at Kerambitan II Community Health Center were aged 26-30 years, had a high school education (58%), and were housewives (40%). Nearly half of the respondents (48%) had low knowledge of postpartum contraception, and only 24% used contraceptive methods, with IUDs being the most common choice (50%). A significant relationship was found between knowledge levels and contraceptive use ($p = 0.003$).

Conclusion: Addressing gaps in knowledge and providing targeted education on postpartum contraception could improve utilization rates and reduce related health risks and economic costs.

Keywords: postpartum contraception, knowledge level, use of family planning, health education.

*Corresponding author:

Ni Putu Lilis Chandrawati
Bachelor of Nursing Study
Program College of Health
Sciences Bina Usada Bali,
Indonesia Email:
putulilis55@gmail.com

Article info:

Received: 29 July 2024

Revised: 11 December 2024

Accepted: 16 December 2024

Date of Publication:

22 January 2025



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License, which allows others to remix, tweak, and build upon the work non-commercially as long as the original work is properly cited. The new creations are not necessarily licensed under the identical terms.

e-ISSN xxxx-xxxx

p-ISSN xxxx-xxxx

Publisher: Junior
Management Indonesia

Cite this article as: Chandrawati, N.P.L., Sari, N.L.P.D.Y., Triana, K.Y., & Agustini, I.G.A.R. (2025). The Relationship between Knowledge Level and Postpartum Contraceptive use Among Postpartum Mothers. *Holistic Journal of Nursing Studies*, 1(1), 22-28. <https://doi.org/10.xxxxx/hjns14>

INTRODUCTION

Postpartum contraception plays a vital role in preventing unintended pregnancies and supporting family planning initiatives. Globally, approximately 225 million women experience pregnancy annually, of which 110 million either do not wish to conceive again immediately or prefer spacing their pregnancies (WHO, 2020). Despite the availability of

various contraceptive methods, only 64% of women worldwide use postpartum contraception, leaving 36% at risk of unintended pregnancies. This gap highlights the significant role of education and awareness in improving contraceptive uptake (Cleland et al., 2014).

In Indonesia, postpartum contraceptive use remains suboptimal. According to the Ministry of

Health, only 65% of the 13.7 million women who give birth annually utilize postpartum contraception, leaving 35% unprotected (Priskatindea & Ronoatmodjo, 2021). In Bali, the uptake is even lower, with only 62% of postpartum mothers utilizing contraception, contributing to increased health risks and economic burdens (Sabilla & Purnaningsih, 2020). At Kerambitan II Community Health Center, postpartum contraceptive use declined significantly from 89% in 2022 to 60.2% in 2023, underscoring the need for targeted interventions.

Previous studies have shown mixed results regarding the relationship between knowledge levels and postpartum contraceptive use (Winner et al., 2012). For example, Octavi et al., (2022) found a significant association between knowledge and contraceptive uptake in South Bangka Regency, whereas Putri & Oktaria, (2016); Priskatindea & Ronoatmodjo (2021) reported no such relationship in Yogyakarta City. This inconsistency highlights the need for further research to explore knowledge gaps and identify effective interventions. This study aims to examine the relationship between knowledge levels and postpartum contraceptive use among mothers at Kerambitan II Community Health Center, Bali, to provide evidence-based recommendations for improving contraceptive practices.

A preliminary study conducted through interviews at the Kerambitan II Health Center revealed that most postpartum mothers lack adequate information about IUD contraception, which remains one of the most effective postpartum contraceptive methods. This finding underscores the importance of targeted educational interventions to address knowledge gaps and promote informed decision-making. To address this issue, this study aims to examine the relationship between the level of knowledge of postpartum mothers and their use of postpartum contraception. The results are expected to inform the development of effective and context-specific intervention programs to improve maternal and family well-being in the region.

METHOD

This study is an analytical observational study with a cross-sectional design, which aims to investigate the relationship between the level of knowledge and the use of contraception (birth control) after childbirth in postpartum mothers at the Kerambitan II Health Center UPTD. Data was collected at a certain time point, with the study population being mothers who gave birth at the Puskesmas for three months, namely March, April, and May 2024, which amounted to 50 postpartum mothers. The sampling technique uses total sampling, so that all populations that meet the inclusion criteria are used as research samples.

Data collection was carried out by contacting respondents and explaining the purpose of the study, followed by filling out a questionnaire. The collected data is then processed by checking its validity and entering it into statistical software. Data analysis included univariate analysis to explore the characteristics of respondents and bivariate analysis to test the relationship between the level of knowledge and the use of postpartum contraception using the chi-square test, with a significance threshold of 0.05. This research has undergone an ethical feasibility review by the Ethics Committee of Stikes Bina Usada Bali and was declared ethically feasible with the number: 179/EA/KEPK-BUB-2024.

RESULTS

The study results are presented in three sections: demographic characteristics of respondents, knowledge levels and contraceptive use, and the relationship between knowledge levels and postpartum contraceptive use. Demographic data or characteristics of respondents in the study are as follows:

Table 1. Characteristics of respondents which include age, education and occupation of postpartum mothers at UPTD Puskesmas Kerambitan II (n=50)

Characteristic	Frequency (n)	Percentage (%)
Age (years)		
19-25	15	30.0
26-30	20	40.0
>31	15	30.0
Education		
Primary School	0	0.0
Junior High School	6	12.0
Senior High School	29	58.0
Higher Education	15	30.0
Work		
Civil servants	10	20.0
Private/Self-Employed	14	28.0

Characteristic	Frequency (n)	Percentage (%)
Housewife	20	40.0
Not working	6	12.0

Table 1 shows that the majority of respondents (40%) are aged 26–30 years. Regarding education, most respondents (58%) have completed high school.

In terms of employment, housewives constitute the largest group, representing 40% of the total respondents.

Table 2. Knowledge Levels and Postpartum Contraceptive Use Among Mothers at UPTD Kerambitan II Health Center (m=50)

Level of Knowledge	Frequency (n=50)	Percentage (%)
High	16	32.0
Moderate	10	20.0
Low	24	48.0
Use of Post-Copy Birth Control		
Yes	12	24.0
Not	38	76.0
Type of birth control (n=12)		
IUD (Intrauterine Device)	6	50.0
Contraceptive Pills	4	33.3
MAL (Exclusive Breastfeeding Mother)	2	16.7

Table 2 illustrates that among the 50 respondents, nearly half (48% or 24 mothers) exhibited a low level of knowledge about the importance of postpartum birth control. In terms of contraceptive use, only 12 mothers (24%) reported using postpartum contraception, whereas the majority (76% or 38

mothers) did not adopt any method. Of the mothers who utilized contraception, half (50%) opted for the IUD (Intrauterine Device), 4 mothers (33.3%) chose contraceptive pills, and 2 mothers (16.7%) relied on the Lactation Amenorrhea Method (MAL), which is based on exclusive breastfeeding.

Table 3. Relationship of Knowledge Level to the use of Postpartum Birth Control in Postpartum Mothers at UPTD Kerambitan II Health Center (n=50)

Postpartum Mothers at GIPD Kerambitan Health Center (n=50)							P value
Knowledge	Use of Post-Copy Birth Control				Total		
	Yes		Not				
	N	%	N	%	n	%	
High	12	24.0	4	8.0	16	32.0	0.003
Moderate	2	4.0	8	16.0	10	20.0	
Low	6	12.0	18	36.0	24	48.0	
Total	20	40.0	30	60.0	50	100.0	

Table 3 presents the results of a bivariate analysis using the chi-square test, which revealed a significant relationship between the level of knowledge of postpartum mothers and their use of contraception after childbirth. The analysis showed that mothers with a high level of knowledge were more likely to use family planning (24%), compared to mothers with a low level of knowledge (12%). This relationship was statistically significant, with a p-value of 0.003.

DISCUSSION

The characteristics of postpartum mothers at the Kerambitan II Health Center include age, education, and occupation. The age of the respondents was divided into three groups: 30% were 19-25 years old, 40% were 26-30 years old, and 30% were over 31

years old. The majority are of productive age. When it comes to education, no one only pursues basic education; 12% have junior high school education, 58% have high school, and 30% have higher education. This level of education supports the understanding and implementation of the Postpartum Family Planning program (Setiasih et al., 2016).

Respondents' occupations also varied: 20% worked as civil servants, 28% in the private or self-employed sector, 40% as housewives, and 12% did not work. These differences reflect socioeconomic backgrounds that can affect access to and preferences for health services, including Postpartum Family Planning (Yulizar et al., 2021). Research shows that higher education is associated with better knowledge about reproductive health (Brown & Berlan, 2019),

and employment status affects the availability of time to access health services (Heinemann et al., 2015).

Previous studies, such as (Triyanto, 2019) and (Setiasih et al., 2016), supporting these findings by showing that age, education, and occupation have a significant effect on various aspects of postpartum maternal health and well-being. Therefore, it is important for health care providers to consider demographic and socioeconomic characteristics in the planning and implementation of public health programs (Aryanty et al., 2021).

The level of knowledge of postpartum mothers about postpartum Family Planning (KB) at the Kerambitan II Health Center at UPTD Kerambitan II varies. Of the 50 respondents, only 32% had high knowledge, 20% had moderate knowledge, and 48% had low knowledge. This shows that almost half of postpartum mothers at this health center need further education about postpartum birth control.

Previous research supports these findings. (Gomez et al., 2015) and (Meilani & Nurhidayati, 2019) emphasizing the need to increase awareness and understanding of postpartum mothers, especially in rural areas. Research in West Java (Anggraeni et al., 2020), Yogyakarta (Rahmidini & Hartiningrum, 2021), and North Sumatra (Nopriyanti & Eliyana, 2022) also shows the low knowledge of postpartum mothers about postpartum birth control.

Factors such as lack of access to information and inadequate education from health workers contribute to the low level of knowledge. Therefore, intensive and continuous educational efforts are needed through creative and easily accessible programs (Curtis & Peipert, 2017). The Kerambitan II Health Center needs to provide easily accessible information, train medical personnel in providing effective education, and involve families and the community to support postpartum family planning practices. This is expected to increase the knowledge and awareness of postpartum mothers, contributing to better reproductive health in the region.

At the Kerambitan II Health Center UPTD, only 24% of postpartum mothers use postpartum contraception, while the majority, namely 76%, do not use it. Of the 12 mothers who used contraception, the most popular method was the IUD, which was chosen by 50% of them. A total of 33.3% chose contraceptive pills, and 16.7% used the Lactation Amenorea Method (MAL). This preference suggests that despite the variety of options, many mothers prefer the methods they consider safer and more effective for the long term.

Previous research by (Tang et al., 2018), (Priskatindea & Ronoatmodjo, 2021) and (Pembajeng et al., 2020) revealed a similar trend, namely the low use of postpartum birth control in Indonesia. Factors contributing to this phenomenon include a lack of knowledge about the benefits and ways of using contraception, concerns about side

effects, as well as a lack of support from couples and families. In addition, some mothers may also be deterred by cultural and religious reasons that oppose the use of certain methods of contraception.

To increase the use of postpartum birth control, a comprehensive approach is needed. Broader and in-depth education about the different methods of contraception and their benefits is essential to increase awareness and knowledge among postpartum mothers. In addition, increased accessibility to contraceptive services and support from couples and families is also urgently needed. With these measures, it is expected that the use of postpartum contraception can increase, which will ultimately contribute to improving maternal and infant health and controlling population growth more effectively.

Research at UPTD Kerambitan II Health Center showed a significant relationship between the level of knowledge of postpartum mothers and the use of postpartum contraception, with the results of the chi-square test showing a p value of 0.003. Mothers who have higher knowledge tend to use contraception after childbirth, such as IUDs, contraceptive pills, or the Lactation Amenorea Method (MAL). In contrast, mothers with lower knowledge are less likely to use this method of contraception. These findings suggest that education and knowledge play an important role in a mother's decision to use postpartum contraception.

The results of this study are consistent with previous studies, including by (Octavi et al., 2022) in South Bangka Regency and (Priskatindea & Ronoatmodjo, 2021), which also found a positive relationship between knowledge level and contraceptive use. A good knowledge of contraceptive methods and their benefits is likely to encourage postpartum mothers to adopt this practice, reducing the risk of unwanted pregnancies and other health complications. Conversely, a lack of knowledge and understanding of contraception can be a major barrier to the application of this method.

To increase the use of postpartum contraceptives, it is important for health care providers and governments to develop comprehensive education programs. The program should include easy-to-understand information about the different methods of contraception, their benefits, and how to use them. In addition, increased accessibility to contraceptive services and support from health workers and the community is urgently needed. These measures will not only increase the knowledge of postpartum mothers but will also strengthen their commitment to using contraception, which will ultimately improve maternal and infant health and reduce the number of unwanted pregnancies.

Implications

This study presents several practical and policy implications. Practically, it highlights the need for targeted health education to enhance postpartum mothers' knowledge and awareness of contraceptive options. Implementing community-based programs, individual counseling, and group sessions can effectively address these knowledge gaps. Additionally, leveraging technology, such as mobile health applications and social media platforms, can expand outreach efforts, particularly in remote areas. Healthcare providers play a critical role in this process and should receive adequate training to deliver comprehensive, culturally sensitive information on postpartum contraceptive options, emphasizing the safety and benefits of methods such as the IUD and the Lactation Amenorrhea Method (MAL). Considering the substantial influence of family and partners in contraceptive decision-making, educational programs should also involve these key stakeholders to create a supportive environment for postpartum mothers. On a policy level, integrating postpartum contraceptive education into routine antenatal and postnatal care services is crucial for improving maternal and family health. Policymakers must prioritize making contraceptive services more accessible, affordable, and stigma-free. Furthermore, public awareness campaigns are essential to addressing societal misconceptions and cultural barriers, thereby promoting the adoption of postpartum contraceptive methods.

Limitations and Recommendations

This study has several limitations that should be acknowledged. First, the cross-sectional design limits the ability to establish causal relationships between knowledge levels and postpartum contraceptive use. Second, the use of self-reported questionnaires may introduce response bias, as participants may underreport or overreport their contraceptive practices. Third, the small sample size of 50 respondents restricts the generalizability of the findings to larger populations. Lastly, external factors such as cultural, religious, and economic influences were not deeply examined in this study but may significantly impact contraceptive decision-making.

Meanwhile, Recommendations Future research, program development, healthcare provider training, and policymaking are critical to advancing postpartum contraceptive uptake. Longitudinal studies are needed to assess the long-term effects of educational interventions, while mixed-method approaches combining quantitative and qualitative data can provide deeper insights into the social, cultural, and psychological factors influencing contraceptive behaviors. Expanding sample sizes in future research will also improve the generalizability of findings. Evidence-based educational interventions should be developed and implemented in primary healthcare facilities and community

settings, with their effectiveness evaluated through randomized controlled trials to ensure they address the needs of postpartum mothers. Building the capacity of healthcare providers is equally essential to equip them with the skills to deliver empathetic and culturally appropriate counseling while addressing myths and misconceptions about contraceptive methods through clear and effective communication. Policymakers should prioritize integrating postpartum contraceptive education into national reproductive health strategies and launch public awareness campaigns to educate communities about the importance of postpartum contraception, overcoming cultural and societal barriers to its adoption. Together, these measures will enhance maternal and family health outcomes on a broader scale

CONCLUSIONS

This study confirms a significant relationship between knowledge levels and the use of postpartum contraceptives among mothers at Kerambitan II Health Center. Mothers with higher levels of knowledge were more likely to adopt postpartum contraception, while those with lower knowledge levels showed limited usage. These findings align with previous research emphasizing the critical role of education in promoting informed decisions regarding contraceptive use.

The results underscore the importance of targeted health education programs to address knowledge gaps and encourage the uptake of effective contraceptive methods. Enhancing nursing services, integrating comprehensive contraceptive counseling into routine postpartum care, and addressing cultural and societal barriers are essential to improving maternal and family health. Further research is recommended to explore long-term and contextual factors influencing contraceptive behaviors, providing a foundation for more effective intervention strategies.

Declaration of Interest

The author states that there is no conflict of interest regarding the publication of this paper. The author has no financial interest or other interest in the products or distributors mentioned in this study. No association, such as consulting, shareholding, or other equity interests or patent licensing arrangements, to disclose.

Funding

The study did not receive any special grants from any funding institution in the public, commercial, or non-profit sectors.

Acknowledgment

We would like to thank everyone who has supported and contributed to this research project. We would like to express our sincere gratitude to the staff at Kerambitan II Health Center for their assistance in

facilitating data collection and for their invaluable support during this study. We also thank our colleagues in the Bachelor of Nursing Study Program, Stikes Bina Usada Bali, Indonesia, for their guidance and support.

Authors' Contributions

All authors contributed substantially to the conceptualization, design, data curation, formal analysis, interpretation, writing, review, and editing of the paper. All authors approve the final version to be published.

Data Availability

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

REFERENCES

- Anggraeni, N., Afifuddin, & Suyeno. (2020). Implementation of the Family Planning Village Program in Improving the Quality of Life of the Community (Case Study of Sumberkarang Village, Mojokerto Regency). *Journal of Public Response*, 14(1), 32–41.
- Aryanty, R. I., Romadlona, N. A., Besral, B., Panggabean, E. D. P., Utomo, B., Makalew, R., & Magnani, R. J. (2021). Contraceptive use and maternal mortality in Indonesia: a community-level ecological analysis. *Reproductive Health*, 18(1), 1–9. <https://doi.org/10.1186/s12978-020-01022-6>
- Brown, M., & Berlan, E. D. (2019). The Intrauterine Device and Adolescents: History and Present. In *Optimizing IUD Delivery for Adolescents and Young Adults: Counseling, Placement, and Management* (pp. 1–10). https://doi.org/10.1007/978-3-030-17816-1_1
- Cleland, J., Harbison, S., & Shah, I. H. (2014). Unmet Need for Contraception: Issues and Challenges. In *Studies in Family Planning* (Vol. 45, Issue 2, pp. 105–122). <https://doi.org/10.1111/j.1728-4465.2014.00380.x>
- Curtis, K. M., & Peipert, J. F. (2017). Long-Acting Reversible Contraception. *New England Journal of Medicine*, 376(5), 461–468. <https://doi.org/10.1056/nejmcp1608736>
- Gomez, A. M., Hartofelis, E. C., Finlayson, S., & Clark, J. B. (2015). Do Knowledge and Attitudes Regarding Intrauterine Devices Predict Interest in Their Use? In *Women's Health Issues* (Vol. 25, Issue 4, pp. 359–365). <https://doi.org/10.1016/j.whi.2015.03.011>
- Heinemann, K., Reed, S., Moehner, S., & Do Ming, T. (2015). Risk of uterine perforation with levonorgestrel-releasing and copper intrauterine devices in the European Active Surveillance Study on Intrauterine Devices. *Contraception*, 91(4), 274–279. <https://doi.org/10.1016/j.contraception.2015.01.007>
- Meilani, M., & Nurhidayati, S. (2019). The effect of maternal education on the selection of Intra Uterine Device (IUD) contraceptives. *Journal of Midwifery Research Indonesia*, 3(2), 82–86. <https://doi.org/10.32536/jrki.v3i2.58>
- Nopriyanti, A., & Eliyana. (2022). The Relationship between Knowledge and Attitudes of Women of Childbearing Age (WUS) with the Use of Implantable Contraceptives. *Tambusai Health Journal*, 3(3), 420–425. <https://doi.org/10.47218/jkpb.v7i1.59>
- Octavi, F. Della, Lestari, F., & Munir, R. (2022). The Relationship between Mother's Knowledge Level and Interest in the Use of Postpartum Intrauterine Contraceptives (IUD). *Journal of Midwifery Care*, 2(02), 133–142. <https://doi.org/10.34305/jmc.v2i2.419>
- Builder, G. S., Azalea, K. Z., Chrisiavinta, K., & Hadayna, S. (2020). Planning and Evaluation of Family Planning Programs during the COVID-19 Pandemic. *Kesmas: National Journal of Public Health*, 3(1), 29–35. https://www.researchgate.net/publication/348049736_Perencanaan_Dan_Evaluasi_Program_Keluarga_Berencana_Pada_Masa_Pandemi_COVID-19
- Priskatindea, & Ronoatmodjo, S. (2021). The Relationship between the Level of Knowledge About Birth Control Devices and the Use of Modern Contraceptives in Adolescent Women Married in Java Island (SDKI Analysis 2017). *Indonesia Journal of Health Epidemiology*, 5(1), 9–18.
- Putri, R. P., & Oktaria, D. (2016). The effectiveness of intra uterine devices (IUDs) as contraceptives. *Faculty of Medicine, University of Lampung*, 5(4), 138.
- Rahmidini, A., & Hartiningrum, C. Y. (2021). Analysis of the Suitability of the Use of Contraceptives with the Purpose of Family Planning using the e-KABE Application. *Journal of Midwifery and Nursing Aisyiyah*, 17(1), 30–47. <https://doi.org/10.31101/jkk.1732>
- Sabilla, A. V., & Purnaningsih, N. (2020). Community Participation in the Family Planning Village (KB) Program. *Journal of Communication Science and Community Development [JSKPM]*, 4(5), 713–729. <https://doi.org/10.29244/jskpm.v4i5.569>
- Setiasih, S., Widjanarko, B., & Istiarti, T. (2016). Analysis of Factors Influencing the Selection of Long-Term Contraceptive Methods (MKIP) in Women of Childbearing Age (PUS) in Kendal Regency in 2013. *Journal of Health Promotion Indonesia*, 11(2), 32.

<https://doi.org/10.14710/jpki.11.2.32-46>

- Tang, J. H., Kamtuwanje, N., Masepuka, P., Zgambo, J., Kashanga, P., Goggin, C., Matthews, N., Mtema, O., Chisanu, N., Phiri, M., Kasawala, M., & Kachale, F. (2018). Implementation of postpartum intrauterine device (PPIUD) services across 10 districts in Malawi. *Malawi Medical Journal*, 30(3), 205–210. <https://doi.org/10.4314/mmj.v30i3.13>
- Triyanto, L. (2019). Factors Affecting the Use of Long-Term Contraceptive Methods (MKJP) in Married Women of Childbearing Age in East Java Province. *The Indonesian Journal of Public Health*, 13(2), 246. <https://doi.org/10.20473/ijph.v13i2.2018.246-257>
- WHO. (2020). *Family Planning/Contraception Methods*. Who.Int. <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>
- Winner, B., Peipert, J. F., Zhao, Q., Buckel, C., Madden, T., Allsworth, J. E., & Secura, G. M. (2012). Effectiveness of long-acting reversible contraception. *Obstetrical and Gynecological Survey*, 67(9), 552–553. <https://doi.org/10.1097/01.ogx.0000421455.21771.a1>
- Yulizar, Y., Rochadi, R. K., Sembiring, R., Nababan, D., Sitorus, M. E. J., & Windra, T. (2021). Analysis of Factors Affecting Pus Participation in Long-Term Contraceptive Methods (MKJP) in East Langsa District in 2021. *PREPOTENT: Journal of Public Health*, 6(1), 113–124. <https://doi.org/10.31004/prepotif.v6i1.2736>