

Factors Influencing Midwives Preparedness in Postnatal Family Planning Services and Their Impact on Contraceptive Care in Independent Midwifery Practices

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Abstract

Midwives, as key providers of family planning services, must continually improve their education, knowledge, and skills to offer effective contraceptive care. Requiring regular updates and elevation of family planning service standards. This ensures the enhancement of the quality of contraceptive services and fosters trust among potential acceptors. This research contributed to analyze the factors affecting midwives' readiness in postnatal family planning services and their correlation with the quality of contraceptive care in Independent Midwifery Practices (PMB). Applied quantitative research with an analytical survey design and a cross-sectional approach. The study samples comprised licensed midwives operating PMB in Sleman. Samples were selected using the quota sampling technique, minimum sample size of 30 respondents. The conducted data analysis involved both univariate and bivariate analyses (regression test). In the univariate analysis, it revealed that the majority of respondents had a vocational education background (53.1%). As for the midwives' knowledge regarding postnatal family planning, a significant majority demonstrated a moderate level of understanding (59.4%). Additionally, most midwives exhibited updated skills following contraceptive training (75%). In the bivariate analysis, the significance values for skills/update training in providing IUD contraceptive services, pill contraceptive services, and knowledge regarding condom contraceptive services were found to be 0.042, 0.026, and 0.019, respectively, all below the threshold of 0.05. In conclusion, there exists a noteworthy correlation between skills acquired through contraceptive training and the provision of IUD contraceptive services as well as contraceptive pills. Moreover, there is a significant correlation between knowledge levels and the provision of condom contraceptive services.

Keywords: *Midwives' readiness; Postnatal Family Planning Services*

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1. Introduction

Postpartum Family Planning (KBPP) is an effort to prevent pregnancy by using contraceptive methods, devices or drugs immediately after giving birth up to 42 days to 6 weeks after giving birth. Effective family planning services can reduce maternal deaths by reducing pregnancies and reducing high-risk births. The KBPP program is intended to regulate birth, maintain pregnancy spacing and avoid unwanted pregnancies, in order to manage pregnancy through the use of contraceptive devices/drugs after giving birth. Contraception, when linked to the purpose of use and its effectiveness, based on existing trends, does not provide a positive picture because the majority of family planning participants still use short-term

contraception. Short-term contraceptive use has a greater chance of discontinuation due to problems with repeat services (Kemenkes, 2021).

Several studies show that effective family planning services (including KBPP) can reduce maternal deaths by reducing pregnancies and reducing high-risk births. If the family planning program can be implemented well again, it is possible that 33% of maternal deaths can be prevented through the use of contraception (Kemenkes, 2021). The high maternal mortality rate in Indonesia is also caused by unwanted pregnancies in married women, especially those who do not use contraception so that the birth spacing is too close, namely 20% (Susanti, 2020).

The return of fertility after giving birth is unpredictable and can occur before the onset of the menstrual cycle, even in breastfeeding women, so the application of KBPP is very important. Contraception should be used before returning to sexual activity, so it is important to use contraception as early as possible after giving birth (Halimahtussadiyah, Susilawati and Herinawati, 2021). KBPP services help families create an ideal distance between pregnancies, because the mother has sufficient time to recover after giving birth and the baby has the opportunity to receive exclusive breast milk and continue for up to two years. So that KBPP plays a role in supporting the reduction of maternal mortality rates, infant mortality rates and accelerating the reduction of stunting. The sooner you choose contraception, the goal of delaying pregnancy will be achieved.

Indonesia's National Population and Family Planning Agency Regulation No. 18/2020 concerning Postpartum Family Planning Services has a goal to enhance family involvement in Family Planning (KB) and reproductive health by implementing improved national strategies for Postpartum Family Planning (KBPP) services. The strategy aims to achieve a 70% participation rate among postpartum mothers or their partners by 2024. This new policy entails updating midwives on various types of contraceptive tools and medications within the BKKBN program, including the use of a single-rod implant, 3-monthly 1cc contraceptive injections, progestin pills (for breastfeeding mothers), combined 3-monthly contraceptive injections, and tubal rings.

Midwives, as providers of Family Planning services, need to improve their education, knowledge, and skills in providing these services. The willingness of patients for Postpartum Family Planning greatly depends on midwives, as counseling is required starting from the mother's prenatal check-up. The preferred methods for KBPP are postpartum Intrauterine Devices (IUDs) and postpartum implants, both of which fall under long-acting contraceptive methods (MKJP).

Continuous improvement of counseling skills and the insertion of Postpartum Family Planning by midwives is highly essential. Socializing information about KBPP can enhance midwives' understanding, leading to successful implementation (Brahmana, 2021). Counseling conducted by midwives during pregnancy and after childbirth can promote the use of effective contraception (Zapata *et al.*, 2015). Keeping pace with the latest advancements in science and technology necessitates the updating and upgrading of Family Planning service standards to improve the quality of contraceptive service provision. Updating the skills for KBPP insertion is crucial to instill confidence in potential acceptors.

2. Methods

The type of research carried out was quantitative research with an analytical survey research design with a cross-sectional approach. The sample in this study were several midwives who had independent midwife practice permits and had an Independent Midwife Practice (PMB) in Sleman Yogyakarta. The sampling technique used is quota sampling. Where the researcher determines the number of samples to be used at a minimum of 30 respondents by also considering the criteria desired by the researcher, namely that PMB is a Delima midwife, provides childbirth and contraceptive services. The research instruments used were questionnaires, observation sheets and master table documentation. The research instrument was created by the researcher himself to suit research needs. The questionnaire consists of 3 parts, the first part is the characteristics of the respondent, the second part is the readiness of midwives in terms of education and skills and the third part is the readiness of midwives in terms of knowledge which consists of 32 statements. The research instrument in the form of an observation sheet provides information on the availability of infrastructure for family planning and contraception services. Meanwhile, to measure contraceptive services at PMB, researchers used a master table as a documentation tool. The data analysis carried out was univariate and bivariate analysis. Bivariate analysis using regression test. This research has gone through an ethical clearance process at the ethics commission health research FIKES UNRIYO with certificate number 052.3/FIKES/PL/V/2023.

3. Results and Discussion

As per Table 1, midwives with both vocational and professional educational backgrounds equally provide postpartum contraceptive services involving IUDs, as observed in 13 PMB (40.6%). The majority of IUD-related postpartum contraceptive services are delivered by midwives possessing moderate knowledge, as noted in 15 PMB (46.9%). Furthermore, a majority of these services are rendered by midwives who have undergone skill-enhancing updates or training, as noted in 22 IMPs. The bivariate analysis between education and contraceptive IUD services resulted in a significance value of 0.534 (> 0.05). Similarly, the bivariate analysis between knowledge and contraceptive IUD services resulted in a significance value of 0.070 (> 0.05). However, the bivariate analysis between skills/training (updates) and contraceptive IUD services revealed a significance value of 0.042 (< 0.05). Based on Table 2, the majority of postpartum contraceptive services involving implants are provided by midwives with a vocational educational

background, as seen in 12 PMB (37.5%). Additionally, most of these services are delivered by midwives who possess moderate knowledge, as noted in 12 PMB (37.5%). Moreover, the majority of midwives offering postpartum contraceptive services involving implants have undergone skill-enhancing updates or training, as observed in 19 PMB (59.4%). The bivariate analysis between

education and implant contraceptive services yielded a significance value of 0.358 (> 0.05). Similarly, the bivariate analysis between knowledge and implant contraceptive services resulted in a significance value of 0.137 (> 0.05). Additionally, the bivariate analysis between skills/training updates and implant contraceptive services revealed a significance value of 0.114 (> 0.05).

Table 1. Cross-tabulation Results of Factors Affecting Midwives' Preparedness in Postpartum Family Planning for Intrauterine Device (IUD) Contraceptive Services

Factors Influencing Midwives' Preparedness	Intrauterine Device (IUD) Contraceptive Services		Total	Sig.
	Available	Not available		
Education				
Vocational	13(40.6%)	4 (12.5%)	17 (53.1%)	0.534
Professional	13 (40.6%)	2 (6.3%)	15 (46.9%)	
Total	26 (81.3%)	6 (18.8%)	32 (100%)	
Knowledge				
Good	0 (0%)	1 (3.1%)	1 (3.1%)	0.070
Moderate	15 (46.9%)	4 (12.5%)	19 (59.4%)	
Poor	11 (34.4%)	1 (3.1%)	12 (37.5%)	
Total	26 (81.3%)	6 (18.8%)	32 (100%)	
Skills (Training)				
Updated	22 (68.8%)	2 (6.3%)	24 (75%)	0.042
Not Updated	4 (12.5%)	4 (12.5%)	8 (25%)	
Total	26 (81.3%)	6 (18.8%)	32 (100%)	

Table 2. Cross-tabulation Results of Factors Affecting Midwives' Preparedness in Postpartum Family Planning for Implant Contraceptive Services

Factors Influencing Midwives' Preparedness	Implant Contraceptive Services		Total	Sig.
	Available	Not available		
Education				
Vocational	12 (37.5%)	5 (15.6%)	17 (53.1%)	0.358
Professional	10 (31.3%)	5 (15.6%)	15 (46.9%)	
Total	22 (68.8%)	10 (31.3%)	32 (100%)	
Knowledge				
Good	0 (0%)	1 (3.1%)	1 (3.1%)	0.137
Moderate	12 (37.5%)	7 (21.9%)	19 (59.4%)	
Poor	10 (31.3%)	2 (6.3%)	12 (37.5%)	
Total	22 (68.8%)	10 (31.3%)	32 (100%)	
Skills (Training)				
Updated	19 (59.4%)	5 (15.6%)	24 (75%)	0.114
Not Updated	3 (9.4%)	5 (15.6%)	8 (25%)	
Total	22 (68.8%)	10 (31.3%)	32 (100%)	

Based on Table 3, the majority of postpartum contraceptive services involving injections are administered by midwives with a vocational educational background, as noted in 16 PMB (50%). Additionally, most of these services are provided by midwives with moderate knowledge, as observed in 19 PMB (59.4%). Furthermore, the majority of midwives delivering postpartum contraceptive services involving injections have undergone

skill-enhancing updates or training, as observed in 24 PMB (75%). The bivariate analysis between education and injection contraceptive services resulted in a significance value of 0.509 (> 0.05). Similarly, the bivariate analysis between knowledge and injection contraceptive services yielded a significance value of 0.312 (> 0.05). Additionally, the bivariate analysis between skills/training updates and injection

contraceptive services revealed a significance value of 0.197 (> 0.05).

Table 3. Cross-tabulation Results of Factors Affecting Midwives' Preparedness in Postpartum Family Planning for Injection Contraceptive Services

Factors Influencing Midwives' Preparedness	Injection Contraceptive Services		Total	Sig.
	Available	Not available		
Education				
Vocational	16 (50%)	1 (3.1%)	17 (53.1%)	0.509
Professional	15 (46.9%)	0 (0%)	15 (46.9%)	
Total	31 (96.9%)	1(3.1%)	32 (100%)	
Knowledge				
Good	1 (3.1%)	0 (0%)	1 (3.1%)	0.312
Moderate	19 (59.4%)	0 (0%)	19 (59.4%)	
Poor	11 (34.4%)	1 (3.1%)	12 (37.5%)	
Total	31 (96.9%)	1 (3.1%)	32 (100%)	
Skills (Training)				
Updated	24 (75%)	0 (0%)	24 (75%)	0.197
Not Updated	7 (21.9%)	1 (3.1%)	8 (25%)	
Total	31 (96.9%)	1 (3.1%)	32 (100%)	

Based on Table 4, the majority of postpartum contraceptive services involving pills are provided by midwives with a vocational educational background, as noted in 15 PMB (46.9%). Additionally, most of these services are delivered by midwives who possess moderate knowledge, as observed in 16 PMB (50%). Furthermore, the majority of midwives providing postpartum contraceptive services involving pills have undergone skill-enhancing updates or training, as

seen in 23 PMB (71.9%). The bivariate analysis between education and pill contraceptive services resulted in a significance value of 0.468 (> 0.05). Similarly, the bivariate analysis between knowledge and pill contraceptive services yielded a significance value of 0.945 (> 0.05). However, the bivariate analysis between skills/training updates and pill contraceptive services revealed a significance value of 0.026 (< 0.05).

Table 4. Cross-tabulation Results of Factors Affecting Midwives' Preparedness in Postpartum Family Planning for Pill Contraceptive Services

Factors Influencing Midwives' Preparedness	Pill Contraceptive Services		Total	Sig.
	Available	Not available		
Education				
Vocational	15 (46.9%)	2 (6.3%)	17 (53.1%)	0.468
Professional	13 (40.6%)	2(6.3%)	15 (46.9%)	
Total	28 (87.5%)	4 (12.5%)	32 (100%)	
Knowledge				
Good	1 (3.1%)	0 (0%)	1 (3.1%)	0.945
Moderate	16 (50%)	3 (9.4%)	19 (59.4%)	
Poor	11 (34.4%)	1 (3.1%)	12 (37.5%)	
Total	28 (87.5%)	4 (12.5%)	32 (100%)	
Skills (Training)				
Updated	23 (71.9%)	1 (3.1%)	24 (75%)	0.026
Not Updated	5 (15.6%)	3 (9.4%)	8 (25%)	
Total	28 (87.5%)	4 (12.5%)	32 (100%)	

Based on Table 5, the majority of postpartum contraceptive services involving condoms are administered by midwives with a professional educational background, as noted in 11 PMB (34.4%). Additionally, most of these services are provided by midwives who possess moderate knowledge, as observed in 11 PMB (34.4%).

Furthermore, a majority of midwives delivering postpartum contraceptive services involving condoms have undergone skill-enhancing updates or training, as seen in 18 PMB (56.3%). The bivariate analysis between education and condom contraceptive services resulted in a significance value of 0.966 (> 0.05). Additionally, the bivariate

analysis between knowledge and condom contraceptive services yielded a significance value of 0.019 (< 0.05). Moreover, the bivariate analysis

between skills/training updates and condom contraceptive services revealed a significance value of 0.168 (> 0.05).

Table 5. Cross-tabulation Results of Factors Affecting Midwives' Preparedness in Postpartum Family Planning for Condom Contraceptive Services

Factors Influencing Midwives' Preparedness	Condom Contraceptive Services		Total	Sig.
	Available	Not available		
Education				
Vocational	10 (31.3%)	7 (21.9%)	17 (53.1%)	0.966
Professional	11 (34.4%)	4 (12.5%)	15 (46.9%)	
Total	21 (65.6%)	11 (34.4%)	32 (100%)	
Knowledge				
Good	0 (0%)	1 (3.1%)	1 (3.1%)	0.019
Moderate	11 (34.4%)	8 (25%)	19 (59.4%)	
Poor	10 (31.3%)	2 (6.3%)	12 (37.5%)	
Total	21 (65.6%)	11 (34.4%)	32 (100%)	
Skills (Training)				
Updated	18 (56.3%)	6 (18.8%)	24 (75%)	0.168
Not Updated	3 (9.4%)	5 (15.6%)	8 (25%)	
Total	21 (65.6%)	11 (34.4%)	32 (100%)	

Factors Influencing Midwives' Preparedness in Postpartum Family Planning Services

The readiness of midwives to deliver services can be assessed based on the following factors:

1. Education

Family planning services align with Indonesia's Minister of Health Regulation No. 21/2021 regarding the provision of health services covering the periods before pregnancy, during pregnancy, childbirth, postpartum, contraceptive services, and sexual health services, as stipulated in Article 27 Paragraph 3: "The administration of contraceptive services is conducted by healthcare professionals possessing competence and authorization."

Vocational midwives (D3) must undergo training and receive authorization based on delegation to insert IUDs and implants, following the applicable regulations. Conversely, as per Indonesia's Minister of Health Regulation No. Hk.01.07/Menkes/320/2020 on the Professional Standards for Midwives, professional midwives do not require training as they already possess a competence level 4 to insert IUDs and implants. Data analysis reveals that the majority of respondents have a vocational education background (D3/D4 in Midwifery), totaling 17 individuals (53.1%).

2. Knowledge

The improvement of service providers' knowledge about postpartum family planning and contraceptives is facilitated through the availability of numerous family planning and contraceptive guideline books. The World Health Organization

(WHO) has released four evidence-based guideline books for contraceptive use. The analysis of midwives' knowledge concerning postpartum family planning indicates a majority with moderate knowledge, totaling 19 individuals (59.4%).

The choice of contraceptive method and initiation time during the postpartum period depends on the woman's knowledge about contraception. Women's perceptions of family planning depend on good knowledge and have a major influence on attitudes and practice (Mekonnen, Gelagay and Lakew, 2021).

Knowledge, understanding and interpretation of contraceptive devices are very important to enable the selection of contraceptive devices that will be used to delay, space or terminate pregnancy as well as indications and contraindications for use that can be differentiated from contraceptive devices (Samsi *et al.*, 2023).

3. Skills (Training)

Skills represent the effort to acquire competence quickly, accurately, and adeptly in performing tasks. Midwives, as healthcare professionals, enhance their skills by updating their knowledge through scientific activities like seminars, workshops, and training sessions. Concerning postpartum family planning services, skills in providing these services can be gained through contraception-related training. Regarding the augmentation of a midwife's abilities in contraceptive services, specific training programs are available to update their knowledge in family planning and contraception, such as the Contraceptive Technology Update (CTU) and

Training of Trainers for Family Planning. Based on updated contraceptive training, the majority of midwives fall into the updated category, totaling 24 individuals (75%).

Contraceptive Services in Independent Midwifery Practices (PMB)

Postpartum contraceptive insertion involves placing contraceptives immediately after a mother gives birth. The utilization of postpartum contraception aids in spacing pregnancies, thereby preventing unintended pregnancies (Nurjanah *et al.*, 2021). The BKKBN's new policy on contraceptive methods and drugs includes a single-rod implant, 3-monthly lcc contraceptive injections, progestin pills (for breastfeeding mothers), combined 3-monthly contraceptive injections, and tubal rings. Ensuring quality postpartum family planning services requires attention to several factors: the availability of competent healthcare personnel, infrastructure, contraceptive tools, medications, guidelines, communication media, and management support (Niam, Wijayanti, & Kristianti, 2022). Data analysis indicates that the most commonly utilized postpartum contraceptive services, in descending order, are injections (96.9%), pills (87.5%), IUDs (81.3%), implants (68.8%), and condoms (65.6%).

Factors Affecting Midwives' Readiness in Postpartum Family Planning Services for Contraceptive Provision

The installation of postpartum contraceptives aims to regulate the intervals between pregnancies, as having pregnancies too close together poses risks to delivering mothers (Indriyani, 2020). The prioritized postpartum contraceptive installations include post-delivery IUDs and implants (Brahmana, 2021).

Efforts to increase mothers' knowledge regarding KBPP include family planning counseling during pregnancy and postpartum. Counseling can have an effect on increasing knowledge about KBPP. To guarantee quality KBPP services, it is necessary to pay attention to the availability of competent health workers, availability of infrastructure, availability of contraceptives and medicines, availability of guidelines and communication media (Niam *et al.*, 2022).

Five factors supporting the success of implementing postpartum contraceptive services include consistent counseling during ANC, patience in reiterating counseling during delivery in labor rooms, operating theaters, or postpartum wards, the patience and skills of the postpartum contraceptive service team members, availability of readily accessible contraceptive tools, the aspiration to reduce maternal mortality rates (MMR), and ensuring the welfare of each accepting family

through a willingness to undergo postpartum contraceptive installations (Brahmana, 2021).

Therefore, readiness from midwives is essential in providing postpartum contraceptive services. According to the analysis, midwives' preparedness factors in postpartum family planning services that significantly influence contraceptive provision include skills/training updates in IUD contraceptive services, skills/training updates in pill contraceptive services, and knowledge of postpartum contraception regarding condom contraceptive services. Continuous training updates in counseling skills and the insertion of postpartum contraceptives by midwives are highly necessary.

The role of health workers influences the use of contraceptives and in providing information because there are still many who rarely go to community services. There are still several factors that can influence maternal behavior. It is not only the role of health workers who play a role because there are many other driving factors, especially family and surrounding environment (Rosmala, Wulandari and Ciptiasrisni, 2023).

Quality counseling between clients and medical personnel, especially midwives, is one of the keys that really determines the success of family planning programs in Indonesia. Clients who receive good counseling tend to choose contraceptives correctly and appropriately and use them at the right time, including using birth control after giving birth (Kemenkes, 2021).

When delivering counseling, particularly to new family planning clients, applying six known steps as the keyword "SATU TUJU" is recommended (Rufaindah & Juwita, 2019). Challenges in implementing postpartum contraceptive services include midwives' inconsistent provision of counseling to every delivering mother at the hospital, uneven skills among midwives in counseling, inadequate updates on midwives' skills in counseling and inserting postpartum contraceptives, and others (Brahmana, 2021). Insufficient knowledge about contraceptive tools can influence decisions in selecting and participating in family planning, considering that adequate knowledge enhances the intention to use contraception, which can subsequently lead to increased uptake of postpartum contraceptives (Dixit & Bandhani, 2019).

4. Conclusions and Suggestions

Based on the discussion and data analysis, it is evident that there is an impact of skills/training updates on IUD contraceptive services, skills/training updates on pill contraceptive services, and knowledge of postpartum contraception on condom contraceptive services. From this research, a recommendation for midwives at PMB is that their preparedness in providing services is crucial as

it encourages clients' contraceptive choices and ensures services tailored to their needs. Future researchers can conduct research by selecting other reinforcing factors that can influence the choice of contraceptive method, such as husbands, parents, friends and community figures.

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