

Original Article

Modern Contraceptive Methods and Exclusive Breastfeeding Practices Among Working Mothers in Indonesia

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Abstract

Exclusive breastfeeding is a recommended practice for infants, but it often conflicts with the contraceptive needs of working mothers. This study aimed to understand the patterns of modern contraceptive use among working mothers who are exclusively breastfeeding in Indonesia. This descriptive study employed a survey method using Google Forms as a data collection tool. A total of 113 working mothers who were exclusively breastfeeding participated in this study. Data collected included the type of contraception used, parity, age, education, and occupation. Findings revealed that 50.4% of participants used modern contraceptive methods, with the intrauterine device (IUD) as the most common choice. Mothers aged 30-39, those with higher education levels, and those with multiple children were significantly more likely to adopt modern contraception compared to their younger, less educated, or primiparous counterparts. Age, education, and parity significantly influence contraceptive choices among breastfeeding working mothers in Indonesia.

Keywords : contraceptive method, exclusive breastfeeding, IUD, reproductive health, working mothers.

Introduction

Indonesia, a country with a rapidly growing population, faces significant challenges in balancing population control with promoting maternal and child health. Exclusive breastfeeding (EBF) is widely recognized as a crucial component of infant health, while modern contraceptive methods play a vital role in family planning and women's empowerment^{1,2}. However, the interplay between these two practices, particularly among working mothers, remains understudied. Maternal health and family planning are essential components of public health, and they are particularly significant for working mothers. In many countries, including Indonesia, the balancing act between professional commitments and child-rearing responsibilities can make it difficult for women to prioritize their reproductive health, including breastfeeding and contraceptive use. Exclusive breastfeeding (EBF) is highly recommended in the first six months of a child's life due to its nutritional and immunological benefits³. However, as many women in Indonesia return to the workforce shortly after childbirth, the overlap between breastfeeding and the need for effective contraception creates complex challenges. The adoption of modern contraceptive methods (MCM) is crucial in preventing unintended pregnancies, which can disrupt the health and well-being of both mother and child⁴. In Indonesia, contraceptive use has become a cornerstone of public health policy, with

significant improvements over the past few decades⁵. The country's family planning program aims to reduce maternal and infant mortality rates, which remain relatively high compared to other Southeast Asian nations⁶. Despite these efforts, there are gaps in understanding the specific needs of working mothers, particularly those who are exclusively breastfeeding. Studies have shown that the decision to use contraception among breastfeeding women can be influenced by various sociodemographic factors, such as age, education level, and parity⁷. These factors play a critical role in shaping a mother's choices regarding reproductive health, which makes it important to consider them when examining contraceptive practices in this population. Exclusive breastfeeding (EBF) and contraception decision-making are interconnected aspects of postpartum care, influencing maternal and child health outcomes. The decision-making process for contraception during the postpartum period is complex and involves various factors, including patient values, communication with partners, and the availability of decision aids². The link between maternal education and contraceptive use is well-documented globally, with higher educational attainment being associated with increased use of modern contraception⁸. In Indonesia, women with higher levels of education are more likely to access information on reproductive health and have the autonomy to make informed decisions about family planning⁹. Education increases women's awareness of the benefits of exclusive breastfeeding as well as the risks of short-spacing pregnancies, which could encourage the adoption of modern contraceptive methods. Furthermore, education plays an essential role in empowering women to seek out healthcare services, including consultations on contraception and breastfeeding practices¹⁰. However, the effects of education on contraceptive use may vary depending on regional and cultural factors, which makes localized studies particularly important.

Maternal age also significantly impacts contraceptive choices, with older mothers more likely to use contraception compared to younger mothers¹¹. In many cultures, women's fertility decisions are influenced by their age and the number of children they already have. In Indonesia, where the fertility rate has been steadily declining over the past decades¹², older mothers are more likely to embrace contraception to prevent unintended pregnancies. Research suggests that women in their 30s and 40s face heightened health risks during pregnancy, making them more inclined to opt for family planning methods¹³. However, younger mothers may feel pressure to prove their fertility or may lack sufficient awareness and access to family planning options⁹. Therefore, the maternal age factor warrants attention in examining contraceptive practices among working mothers in Indonesia. In addition to education and age, parity, or the number of children a woman has, can also play a crucial role in shaping contraceptive choices. Studies have found that women with multiple children are more likely to use modern contraceptive methods than those with fewer children¹⁴. In Indonesia, where traditional values regarding family size still hold influence, women with several children may be more motivated to use contraception to prevent additional pregnancies¹⁵. High parity is often associated with a shift in reproductive goals, with many women preferring to limit family size after having reached their desired number of children⁸. Conversely, women with fewer children may be less inclined to use contraception due to the perceived need for more children or societal expectations regarding family structure¹⁶. These dynamics underscore the importance of understanding how parity influences contraceptive decision-making in Indonesia. Modern contraceptives³, like pills, patches, injections, condoms, IUDs, implants, and sterilization, are designed to prevent pregnancy and are generally safe and effective, but their success depends on correct usage¹⁰. Sterilization,

IUDs, and implants are the most effective at preventing unintended pregnancies, while injectables and hormonal methods like the pill are slightly less effective, and the use of modern contraceptives has increased from 73.6% in 2000 to 76.8% in 2023¹⁷.

This study aimed to investigate the patterns of modern contraceptive use among exclusively breastfeeding working mothers in Indonesia. Understanding the contraceptive choices made by this population is essential for promoting reproductive health and family planning. By examining the factors influencing contraceptive use, this research can contribute to the development of more effective strategies to support working mothers in achieving their family planning goals while maintaining exclusive breastfeeding.

Methods

Design and participants

This cross-sectional study was carried out using 113 breastfeeding working mothers in Malang, East Java, Indonesia who work in formal or informal field in Malang, East Java, Indonesia. The participants were selected through purposive sampling. Participants who could participate in the study must meet the following criteria such as 1) Were working mothers, 2) The last child was 6 to 24 months old, 3) Willing to fill out the questionnaire on the Google form, 4) Had returned to their workplace when the study was conducted. The exclusion criteria were participants who, 1) Had never breastfed their baby; 2) Had a child with a congenital disability that interfered with the breastfeeding process. Due to limited resources or time, this sample was chosen for its accessibility, enabling us to conduct the research efficiently. Following data collection, 113 women completed the survey.

Data collection and Instruments

Following the preparation of the questionnaire and consent form in Indonesian, the validity of the questionnaire was then examined by two midwifery educators and a doctor who were trained as breastfeeding counsellors. Furthermore, a preliminary survey was conducted with 5 breastfeeding working women living in Malang, and there was no difficulty in comprehending or completing the survey. As a result, items were deemed appropriate for the main survey. Participant demographics, including maternal and child age, place of residence, educational attainment, employment status, daily working hours, and monthly income, were captured through seven questionnaire items. Modern contraceptive method choice were assessed using an open-ended question: "According to your situation, what kind of modern contraception method do you use right now?". Data collection occurred from June to August 2024 using Google Forms as the primary data collection instrument. The study team created a questionnaire and additional questions in the Google form. Subsequently, the link was broadcasted through online media such as WhatsApp Group and Instagram. Participants were recruited through a digital recruitment strategy. A flyer containing a QR code and clickable link was disseminated via WhatsApp and Instagram Stories, directing potential participants to an online information sheet. Informed consent was obtained from participants who chose to enroll in the study. The information sheet detailed the study's objectives, procedures, and data confidentiality measures, and participants were assured of their right to withdraw at any time. Data was collected via an online questionnaire, which took approximately 10 minutes to complete. All participants received a US\$5 mobile coupon as a token of appreciation.

Statistical analysis

In this study, a quantitative analysis using descriptive statistics such as frequencies, percentages, and measures of central tendency (mean, median, mode) will be conducted to examine the distribution of modern contraceptive methods among working mothers who are exclusively breastfeeding. The results will be presented visually using bar charts and pie charts to facilitate understanding and interpretation. Data analysis will be performed using IBM SPSS for Windows version 21.0 (IBM Corp., Armonk, NY, USA).

Ethical Consideration

This study was approved by the Study Ethics Committee of State University of Malang (6.6.4/UN32.14.2.8/LT/2024). The participants were assured of confidentiality and no need to write their names in the questionnaire. The study was conducted following the Declaration of Helsinki. Informed consent was obtained from the participants.

Results

The mean age of 113 participants was 32,2 years \pm 4.210 (range 23 to 42 years). Regarding education, 57,5% held university degrees, and 59,3% were employed by government-owned workplaces. A total of 40,76% worked for over 8 hours daily and 73,3% were paid more than 2.923.278 or USD 179,67 (Table 1). The bivariate analysis showed that mothers who chose to use modern contraceptive methods were likely around 30-39 years old, had more than 1 child, and had a higher educational background.

Of the modern birth control methods chosen by working breastfeeding mothers, the IUD (30.09%) is the most popular, followed by condoms (7.96%). However, almost half of the women surveyed (49.56%) opted not to use any modern birth control (Fig.1).

Table 1. Sociodemographic characteristics, modern contraceptive method, and factors affecting breastfeeding among working mothers (N=113)

Characteristics	Categories	Total (N=113), n (%)	Modern Contraceptive Method n (%)		X^2 (p)
			No (n=56)	Yes (n=57)	
Sociodemographic characteristics	Mean \pm SD (range),	32,20 \pm 4.210 (23-42)			
Age of mothers in years	< 20	0 (0)	0 (0)	0 (0)	0.345 (.008)*
	20-29	42 (37.2)	14 (25)	28 (49.1)	
	30-39	70 (61.9)	41 (73.2)	29 (50.9)	
	>40	1 (0.9)	1 (1.8)	0 (0)	
Age of child in months	6-12	43 (38.05)	17 (30.4)	26 (45.6)	1.375 (.399)
	13-18	45 (39.82)	24 (42.9)	21 (36.8)	
	19-24	25 (22.12)	15 (26.8)	10 (17.5)	
Parity	Primiparous	60 (53.1)	35 (62.5)	25 (43.9)	2.133 (.047)*
	Multiparous	53 (46.9)	21 (37,5)	32 (56.1)	
Educational status	Primary education	48 (42.5)	16 (28,6)	32 (56.1)	0.313 (.003)*
	Higher education	65 (57.5)	40 (71.4)	25 (43.9)	
Place of work	Government-owned workplace	67 (59.3)	32 (57.1)	35 (61.4)	0.838 (.645)
	Private companies	46 (40.7)	24 (42.9)	22 (38.6)	

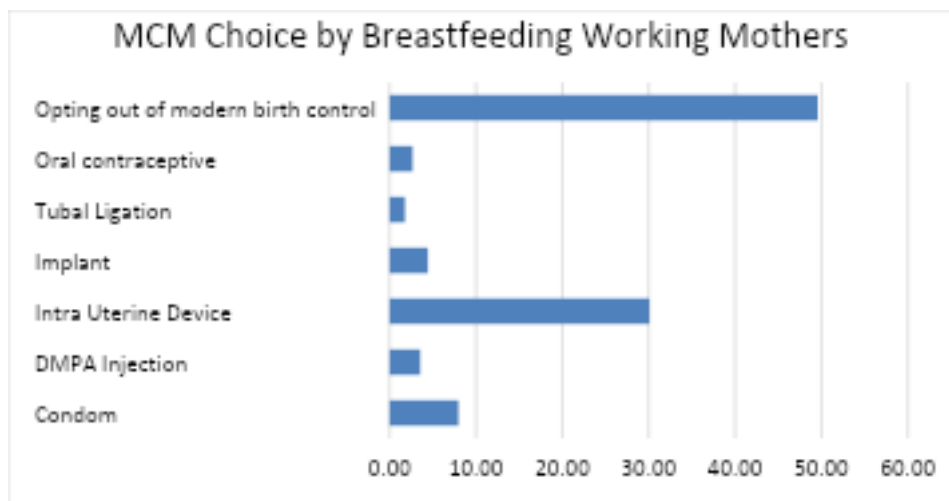
Characteristics	Categories	Total (N=113), n (%)	Modern Contraceptive Method n (%)		χ^2 (p)
			No (n=56)	Yes (n=57)	
Working Hours	< 8	67 (59.3)	32 (57.1)	35 (61.4)	1.193 (.645)
	≥ 8	46 (40.7)	24 (42.9)	22 (38.6)	
Mother's income (Rupiah) [†]	< 2.923.278	28 (24.1)	17 (30.4)	16 (28.1)	1.117 (.789)
	≥ 2.923.278	85 (73.3)	39 (69.6)	41 (71.9)	

† 1 USD equal to IDR 16.270

Discussion

This study was the first to examine the modern contraceptive method chosen by breastfeeding working mothers in Indonesia. The results showed that 50.4% chose to use modern contraceptive methods such as oral contraception, tubal ligation, implant, Intra Uterine Device (IUD), DMPA injection, and condoms. The high rate of modern contraceptive use can be attributed to several supporting factors. This study indicates that the factors influencing the use of modern contraceptives are maternal age, education level, and parity.

This study still has some limitations. First, the number of respondents in this study needs to be increased to enrich the data. Furthermore, further research is needed to further explore the reasons for choosing these contraceptive methods.



MCM: Modern Contraceptive Method

DMPA: Depo Medroxyprogesterone Acetate

Figure 1. Modern Contraceptive Method Chosen by Breastfeeding Working Mothers

This study shows that mothers aged 30-39 were 0.345 times more likely to choose modern contraceptive methods (MCM) compared to younger age groups. Multiple studies have found that age has substantially impacted MCM. Women over 30 face heightened health risks during pregnancy, including more C-sections and neonatal complications. This can impact their choice to use contraception to prevent unintended pregnancies. For women with chronic health issues, the risks and benefits of both pregnancy and contraception are crucial considerations. Yet, these women often encounter barriers to contraceptive use rooted in personal beliefs rather than health concerns^{18,19}. Social networks within households significantly influence contraceptive decisions. In India, younger women are more likely to choose permanent contraception

if their older peers have. Community health workers and peer educators play a vital role in promoting informed discussions about modern contraception, leading to increased adoption among women over 30²⁰. This study shows that mothers aged 30-39 were 0.345 times more likely to choose modern contraceptive methods (MCM) compared to younger age groups. Multiple studies have found that age has substantially impacted MCM. Women over 30 face heightened health risks during pregnancy, including more C-sections and neonatal complications. This can impact their choice to use contraception to prevent unintended pregnancies. For women with chronic health issues, the risks and benefits of both pregnancy and contraception are crucial considerations. Yet, these women often encounter barriers to contraceptive use rooted in personal beliefs rather than health concerns^{18,19}. Social networks within households significantly influence contraceptive decisions. In India, younger women are more likely to choose permanent contraception if their older peers have. Community health workers and peer educators play a vital role in promoting informed discussions about modern contraception, leading to increased adoption among women over 30²⁰.

This study indicates that mothers with a higher education level were 0.313 times more likely to choose modern contraceptive methods compared to the lower education group. Maternal education significantly influences the decision to use modern contraceptive methods, as it enhances awareness, knowledge, and the ability to make informed choices regarding family planning. Educated women are more likely to adopt modern contraceptive methods due to increased access to information and healthcare services, as well as a better understanding of the benefits of family planning^{21,22}. Education empowers women to make informed decisions about their reproductive health, leading to increased contraceptive use. Promoting education among women can positively impact the adoption of modern contraceptive methods, ultimately contributing to better family planning outcomes and maternal health²³. Higher educational attainment among women is associated with increased use of modern contraceptives and awareness of sexually transmitted diseases, particularly in less-developed countries^{24,25}.

This study shows that mothers who have more than one child were 2.133 times more likely to choose MCM compared to the primiparous group. Parity, or the number of children a woman has, significantly influences the decision-making process regarding modern contraceptive methods. Research suggests that the number of children a woman has significantly influenced her choice of contraceptive method. Studies show that women with more children are more likely to choose certain types of contraception, particularly in countries like Pakistan where son preference is prevalent. Cultural factors and lack of access to family planning services, especially in rural areas, contribute to unmet needs for limiting childbearing among high-parity women^{15,26}.

Women with higher parity are often more inclined to use modern contraceptives. Studies in Nigeria and Uganda have shown that women with more children are more likely to adopt contraceptive methods to limit further childbearing^{8,27}. However, high parity can also be a barrier due to fears of side effects and cultural or religious opposition²⁶.

This study examined contraceptive use among breastfeeding working mothers in Indonesia. Findings revealed that over half used modern contraceptives, influenced by age, education, and parity. Older women, those with higher education, and women with multiple children were more likely to use modern contraceptives. However, the study has limitations and requires further research to explore reasons for contraceptive choices.

Conclusion

This study finds that modern contraceptive use among breastfeeding working mothers in Indonesia is mainly influenced by age, education, and the number of children. Mothers aged 30-39, with higher education, and multiple children are more likely to choose modern contraception. These insights highlight the need for targeted support and tailored information on family planning for this group, which can help improve health policies and reduce unintended pregnancies in Indonesia.

Funding

This research was funded by State University of Malang (Grant number: 3.4.93/UN32/KP/2024)

Conflict of Interest

The author(s) declared no conflict of interest.

Acknowledgement

The authors would like to acknowledge the Research Institute Community Engagement, State University of Malang for their support. We also are grateful of breastfeeding working mothers for participating in this study.

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