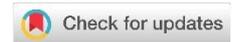


Factors Influencing the High Acceptance of Injectable Contraceptives

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Abstract:

The use of injectable contraceptives remains the leading choice among women of reproductive age (WRA) in various regions in Indonesia. The number of injectable family planning (FP) acceptors has increased significantly compared to other contraceptive methods. This study aims to describe and analyze the factors influencing the high number of injectable contraceptive acceptors. This research employed a descriptive, cross-sectional design. The study population consisted of all active injectable contraceptive acceptors (35 respondents), selected using a total sampling technique. Data were analyzed descriptively using frequency and percentage distribution. The results showed that most respondents had good knowledge about injectable contraceptives (60.0%), a positive attitude toward their use (68.6%), received spousal support (74.3%), perceived the role of health workers as good (80.0%), and stated that access to services was easily reachable (82.9%). These factors collectively contributed to the high interest and continued use of injectable contraceptives in the study area. These findings underscore the importance of involving husbands and ensuring that midwifery services are supportive and accessible to sustain family planning programs in rural settings.

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INTRODUCTION

Family planning represents a cornerstone strategy for advancing sustainable human development, reducing maternal and child mortality, and promoting gender equity worldwide (Askew et al., 2024). As a key component of reproductive health services, contraceptive use empowers individuals and couples to determine the timing and spacing of pregnancies, thereby contributing to improved socioeconomic outcomes and health system efficiency (Jejeebhoy & Sathar, 2024). Globally, the uptake of modern contraceptive methods has expanded significantly over recent decades; however, patterns of method preference vary considerably across regions, influenced by sociocultural contexts, health system structures, and individual perceptions (Soin et al., 2022). Understanding the determinants of contraceptive choice is therefore critical for designing responsive, equitable, and effective family planning programs that align with users' needs and realities (Feriani et al., 2024).

In Indonesia, family planning has long been prioritized as a national development strategy to enhance family welfare and moderate population growth (Utomo et al., 2025; Widayanti et al., 2024). Despite overall increases in contraceptive prevalence, a pronounced method skew persists, with injectable contraceptives dominating the method mix (Humphreys et al., 2024). Recent Demographic and Health Survey data indicate that married women using modern contraception rely on injectables,

primarily depot medroxyprogesterone acetate (DMPA), far exceeding the uptake of oral pills, intrauterine devices, or implants (Abukres, 2025). This overwhelming preference distinguishes Indonesia from many other low- and middle-income countries. It warrants an in-depth investigation into the contextual factors driving such concentrated adoption of the method, particularly in decentralized service delivery environments where community-based providers play pivotal roles (Purwoko et al., 2025).

Theoretical frameworks from health behavior science provide valuable lenses for analyzing contraceptive decision-making. The Health Belief Model (HBM) elucidates how perceived susceptibility to unintended pregnancy and perceived benefits of injectables, such as high efficacy and privacy, influence uptake (Wu et al., 2022; Efendi et al., 2025). Andersen's Behavioral Model of Health Services Use further explains utilization through predisposing characteristics (education, parity), enabling resources (proximity to services, cost), and need factors (Márquez-Lameda, 2021). Complementing these, the Theory of Planned Behavior (TPB) highlights the role of attitudes, subjective norms (including partner and community support), and perceived behavioral control in shaping intentions to use specific methods (Tesfaye et al., 2025). Collectively, these models underscore that injectable preference emerges not from clinical attributes alone but from a dynamic interplay of psychological, social, economic, and structural factors embedded within local contexts (D'Souza et al., 2022).

A critical yet underexplored setting for understanding this phenomenon is the private midwifery practice (PMB), especially in rural Indonesia. PMBs are a vital pillar of primary reproductive healthcare in remote areas such as Tembokrejo and Gumukmas (Jember Regency), where geographic barriers limit access to public health facilities. These practices foster distinctive provider–client relationships characterized by interpersonal continuity, high trust, and culturally congruent counseling shaped by local norms (Simmelink et al., 2025). Midwives in PMBs often serve as both clinical providers and community influencers, potentially amplifying their role in shaping contraceptive preferences. However, limited research has examined how the micro-context of PMBs—where accessibility, provider recommendation, and sociocultural dynamics converge—specifically drives the disproportionate uptake of injectables compared to other methods (Khadijah et al., 2024).

This study investigates the multifaceted determinants of high injectable contraceptive acceptance within PMB settings in rural East Java, Indonesia. Moving beyond individual-level factors, we adopt an ecological perspective to analyze how service delivery characteristics (flexible hours, home visits), provider practices (counseling approaches, method promotion), and community-level influences (spousal attitudes, peer networks) interact to reinforce injectable preference (Petalina et al., 2023). By centering the PMB context, a dominant yet poorly understood channel for contraceptive provision in rural Indonesia, this research addresses a significant gap in the literature. It offers evidence to guide midwifery training, service design, and policy initiatives aimed at expanding method choice while respecting user preferences in community-based care.

METHOD

This study uses a descriptive, cross-sectional design to identify the factors influencing the high number of injectable contraceptive acceptors at PMB, Tembokrejo Village, Gumukmas District, Jember Regency. A cross-sectional design was chosen to provide a snapshot of the factors at a single point in time, acknowledging that it cannot infer a causal relationship. The study population consists of all 35 active injectable contraceptive acceptors. Because the population is relatively

small, the sampling technique is total sampling, which treats the entire population as the research sample.

The research instrument is a structured questionnaire developed based on theories and previous studies, consisting of 33 questions covering six aspects: respondent characteristics (6 items), knowledge (10 items), attitudes (8 items), husband support (5 items), health worker roles (3 items), and service access (1 item). Knowledge questions are in multiple-choice format with a score of 1 for correct answers and 0 for incorrect ones. At the same time, statements on attitudes, husband support, health worker roles, and service access are measured using A four-point Likert scale (strongly agree – strongly disagree). The questionnaire was piloted on 30 respondents in a similar area to assess validity and reliability. The test results showed that all items had correlation values > 0.30 ($p < 0.05$), indicating validity, and that the instrument had a reliability value ≥ 0.70 , indicating reliability.

The inclusion criteria for this study were women of reproductive age (15–49 years) who were active users of injectable contraceptives, residing in the PMB working area, and willing to participate as respondents. The exclusion criteria included pregnant women, those experiencing health or cognitive disorders, and those who refused to participate. Data were collected through direct completion of the questionnaire with the assistance of the researchers. The data were analyzed descriptively using frequency distributions and percentages to describe respondents' characteristics and factors influencing high injectable contraceptive acceptance. This study was conducted in accordance with research ethics principles, including obtaining respondent consent and maintaining data confidentiality.

This study received ethical approval from the Faculty of Health Sciences, Institute of Technology, Science, and Health dr. Soepraoen Hospital. The approval ensures that all research procedures adhere to established ethical standards for human subjects' research. Informed consent was obtained from all participants prior to data collection, safeguarding their rights and confidentiality. The ethical clearance underscores the study's commitment to integrity, participant welfare, and scientific rigor.

RESULT

Respondent Characteristics

Table 1. Frequency Distribution of Respondent Characteristics

Characteristics	Category	Frequency (n)	Percentage (%)
Age (years)	20–25	8	22.9
	26–30	12	34.3
	31–35	10	28.6
	>35	5	14.2
Education	Elementary/Middle School	9	25.7
	High School	18	51.4
	Bachelor's Degree	8	22.9
Occupation	Housewives	20	57.1
	Farmers/Laborers	8	22.9
	Self-Employed	4	11.4
	Civil Servants/Private Sector	3	8.6
Number of children	1 child	10	28.6
	2 children	15	42.9
	≥ 3 children	10	28.6

Based on Table 1, the majority of respondents were aged 26–30 years (34.3%), had completed high school (51.4%), and were housewives (57.1%). Most respondents had two children (42.9%). This indicates that most injectable contraceptive users are of productive age, have active family responsibilities, and tend to choose injectable methods due to their practicality and minimal disruption to daily activities.

Respondents’ Knowledge, Attitudes, Support, Health Worker Role, and Access

Table 2. Distribution of Factors Influencing Injectable Contraceptive Use

Factor	Category	Frequency (n)	Percentage (%)
Knowledge about Injectable Contraception	Good	21	60.0
	Enough	10	28.6
	Poor	4	11.4
Attitude towards Injectable Contraception	Positive	24	68.6
	Negative	11	31.4
Husband’s Support	Supportive	26	74.3
	Not Supportive	9	25.7
Role of Health Workers	Good	28	80.0
	Enough	6	17.1
	Poor	1	2.9
Access to Family Planning Services	Easily Accessible	29	82.9
	Moderately Accessible	5	14.3
	Difficult	1	2.8

As shown in Table 2, the majority of respondents demonstrated good knowledge about injectable contraception (60.0%) and held positive attitudes toward its use (68.6%). Most respondents also reported support from their husbands (74.3%), rated the role of health workers as good (80.0%), and stated that access to family planning services was easy (82.9%).

Overall, the results of this study indicate that a combination of individual, interpersonal, and service-related factors influences the high utilization of injectable contraception at PMB. Most respondents demonstrated good knowledge, positive attitudes, strong support from their husbands, positive evaluations of health worker performance, and easy access to family planning services. These patterns suggest that both personal understanding and external support systems play a crucial role in sustaining the continued use of injectable contraception. The convergence of these factors forms a supportive environment that facilitates consistent contraceptive use, thereby reinforcing the preference for injectable methods within this community. This synthesis of findings provides an essential foundation for deeper interpretation in the subsequent discussion section, particularly in understanding how these determinants interact to shape contraceptive behavior among women of reproductive age.

DISCUSSION

The findings of this study indicate that the high utilization of injectable contraception at PMB is shaped by a combination of interconnected factors rather than a single dominant determinant. Overall, the descriptive results show positive patterns across knowledge, attitudes, husband's support, the role of health workers, and service accessibility. Synthesizing these findings suggests that women's decision to use injectable contraception emerges through the interaction of individual awareness, interpersonal support, and service-related enabling conditions within the rural PMB setting (Birabwa et al., 2025).

First, knowledge about injectable contraception was high among respondents, which aligns with the idea that informed decision-making is foundational to contraceptive use. Instead of merely repeating that respondents had “good knowledge,” this finding suggests that educational interactions with midwives, previous contraceptive experiences, and community familiarity with injectable contraception play an important role in shaping readiness to adopt and maintain this method (Cieri-Hutcherson et al., 2025). In rural settings such as Tembokrejo, where health literacy levels can vary widely, consistent exposure to midwife-led counseling may be especially influential in improving women’s confidence in contraception choices.

Respondents also reported predominantly positive attitudes toward injectable contraception. From a behavioral standpoint, these attitudes are essential, as the Theory of Planned Behavior highlights that a person's intention to act is shaped by their evaluations of the behavior. In this context, seeing injectable contraception as practical, effective, and compatible with daily routines likely strengthens continued use. These attitudes matter even more in settings where daily labor activities, household responsibilities, and cultural norms influence women's health-related decisions (Fantaye et al., 2025).

Husband’s support emerged as the factor with the highest proportion in the descriptive results (74.3%). While this study does not conduct statistical tests to determine factor dominance, this high percentage suggests that spousal approval may function as a critically enabling factor, particularly in communities where patriarchal decision-making is the norm. Within such sociocultural contexts, husbands often hold significant influence over reproductive choices. Their encouragement, permission, and logistical support (such as accompanying visits or providing transportation) can directly facilitate a woman's ability to maintain regular injection schedules. These findings support the Health Belief Model, which posits that social cues and interpersonal influences serve as triggers that shape health behavior (Mumtaz & Khan, 2025; Akhiat et al., 2024).

The role of health workers, especially midwives, was also perceived overwhelmingly positively. This aligns strongly with Andersen’s Behavioral Model, which describes the performance and availability of health services as key enabling factors in health service utilization. In midwifery private practice settings, personalized communication, relational trust, and continuity of care can meaningfully enhance client satisfaction and adherence. In this study, respondents described midwives as playing an important role in providing clear explanations, reinforcing consistent injection schedules, and managing concerns about side effects. These elements likely contribute to sustained contraceptive use (John et al., 2024).

Finally, the ease of access to services (82.9%) underscores the importance of geographic and logistical factors in contraceptive uptake. PMB's location within the community, flexible service hours, and approachable environment reduce structural barriers commonly associated with family planning access. This finding aligns with Andersen's assertion that accessible services significantly increase the likelihood of health service utilization (Alkhalwaldeh et al., 2023).

Taken together, these findings strongly support behavioral health theories, particularly Andersen’s Behavioral Model, as the enabling factors of spousal support and service accessibility appeared to play a more immediate functional role than predisposing factors such as education or occupation in this cohort. This interplay highlights that in rural PMB settings, interpersonal and service-related factors may exert a more substantial real-world influence on contraceptive choices than socioeconomic characteristics alone (Ma et al., 2025).

This study has several limitations that must be acknowledged. First, the sample size was relatively small ($n = 35$) and was obtained from a single midwifery practice, limiting the generalizability of the findings to broader populations. Second, the cross-sectional design restricts the ability to infer causal relationships between the identified factors and the use of injectable

contraception. Third, the study employed only descriptive statistical analysis; therefore, claims of factor dominance cannot be drawn without further analytical testing. Future research should consider using inferential statistics, larger multi-site samples, and mixed-method approaches to achieve a more comprehensive understanding of contraceptive decision-making dynamics.

CONCLUSION

The high number of injectable contraceptive acceptors at this rural PMB setting is not attributable to a single cause, but rather to a synergistic ecosystem of client knowledge, positive attitudes, strong spousal support, trusted midwifery care, and easily accessible services. These interacting factors collectively facilitate women's continued use of injectable contraception and reflect a supportive sociocultural and service environment that enables consistent contraceptive behavior. Understanding these interrelated determinants is essential for strengthening community-based family planning strategies and ensuring continuity of contraceptive use among women of reproductive age.

Midwives are encouraged to provide structured counseling that actively involves husbands, addresses their concerns, and reinforces their role in shared reproductive decision-making. Counseling should also emphasize the management of common side effects to support continued contraceptive use. In addition, reminder systems through WhatsApp or SMS should be implemented to help clients adhere to their repeat injection schedules. At the community level, health programs should promote male involvement and enhance contraceptive literacy through cadres and village-based health forums. For health authorities, supporting PMB midwives through relevant training and ensuring the consistent availability of contraceptive supplies is essential. Future research is recommended to include larger and multi-site samples, use analytical study designs, and address potential social desirability bias in respondents' answers.

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