

THE RELATIONSHIP BETWEEN THE USE OF INJECTABLE HORMONAL CONTRACEPTIVES AND THE INCIDENCE OF VAGINAL DISCHARGE AMONG FAMILY PLANNING ACCEPTORS

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ABSTRACT

The use of hormonal injectable contraception is known to have side effects, one of which is pathological vaginal discharge (leucorrhea). This study aims to determine the relationship between the use of hormonal injectable contraception and the incidence of vaginal discharge among family planning (FP) acceptors at the Midwife Rini Susi Safitri's Independent Practice, Huta I Pematang Kerasaan, in 2024. This research employed an analytical method with a cross-sectional design. The population was all acceptors of 1-month and 3-month injectable contraceptives, totaling 41 respondents, selected using purposive sampling. Data were collected using a questionnaire and analyzed using univariate and bivariate methods. The bivariate analysis used the Chi-square test with a significance level of 0.05. The results showed that most respondents (68.3%) used 3-month injectable contraceptives, and 58.5% experienced vaginal discharge. The Chi-square test indicated a significant relationship between the duration of contraceptive use and the incidence of vaginal discharge ($p = 0.005$). It can be concluded that the use of hormonal injectable contraceptives, especially for more than one year, is significantly associated with the occurrence of vaginal discharge in FP acceptors.

Keyword: Injectable Hormonal, Contraceptives, Vaginal Discharge, Family Planning

Introduction

Family planning (FP) is one of the key public health strategies aimed at reducing birth rates and improving women's and family well-being. Globally, the use of modern contraceptive methods has significantly increased, with the World Health Organization (WHO, 2025) reporting that over 60% of women of reproductive age use some form of modern contraception. In Indonesia, according to the National Population and Family Planning Board (BKKBN, 2022), injectable hormonal contraception remains one of the most preferred methods due to its effectiveness, convenience, and accessibility.

However, the use of hormonal contraception is not without side effects. One of the most common complaints among users is pathological vaginal discharge (leucorrhoea). Hormonal changes induced by contraceptive injections particularly those containing estrogen and progesterone can disrupt the vaginal microflora and create a favorable environment for infections (Afianti and Budiarto, no date). A study by Sari (2015) found a significant relationship between hormonal contraceptive use and increased incidence of vaginal candidiasis, especially among women aged 16–35 years, who were identified as the most vulnerable group. (Mirza Aulia Cahyani, 2023)

At the local level, in Simalungun Regency, particularly in the service area of Midwife Rini Susi Safitri's Private Practice Clinic (PMB) in Huta I, Pematang Kerasaan, injectable contraceptives remain the primary choice among family planning acceptors. However, an increasing number of users have reported vaginal discharge complaints, especially among those who have used injections for a prolonged period. Preliminary data collected in the field show that many acceptors of 1-month and 3-month injectable contraceptives have experienced symptoms of both physiological and pathological leucorrhoea.

Vaginal discharge should be given special attention because, if left untreated, it can lead to infertility, ectopic pregnancy, symptoms of CA Cervix, and even death. If left untreated, vaginal discharge that was initially normal will harm the hymen due to the bacteria in the secretion, causing discomfort and infections like vaginitis, candidiasis, vulvitis, cervicitis, and endometriosis. The majority of women's reproductive issues are defined by the presence of abnormal vaginal discharge; up to 75% of women worldwide have had vaginal discharge at some point in their life. (Ramdhani, Amran and Padang, 2025)

One of the best forms of birth control is hormonal contraception, which modifies the body's natural hormone levels. Injectable contraception, oral contraceptives, hormonal IUDs, and implants are the four forms of hormonal contraception. Hormonal contraceptive side effects include weight gain, irregular menstrual cycles, elevated blood pressure, nausea, breast tenderness, headaches, and vaginal discharge. (Dewi *et al.*, 2023)

Although various studies have discussed the relationship between

hormonal contraceptive use and vaginal discharge, the scientific novelty of this study lies in its specific focus on the duration of use (less than or more than one year) and type of injectable contraception (monthly vs. quarterly) in relation to the incidence of pathological discharge particularly within the context of a midwife-led practice in a rural setting, which has not been widely explored. (Bahat *et al.*, 2024).

Therefore, the purpose of this study is to analyze the relationship between the use of hormonal injectable contraception and the incidence of vaginal discharge among family planning acceptors at Midwife Rini Susi Safitri's Private Practice in Huta I, Pematang Kerasaan, Simalungun Regency, in the year 2024.

Research Methods

This research applied an analytic cross-sectional study design to examine the relationship between hormonal injectable contraceptive use and the incidence of pathological vaginal discharge. The study was conducted from March to June 2024 at Midwife Rini Susi Safitri's Private Practice, Huta I, Pematang Kerasaan, Simalungun Regency, Indonesia.

A total of 41 respondents were selected using purposive sampling, with inclusion criteria being women who used 1-month or 3-month injectable contraceptives and experienced vaginal discharge. Data were collected using a validated structured questionnaire, covering respondent characteristics, contraceptive use, and symptoms of discharge.

Data were analyzed using SPSS, employing univariate analysis for descriptive statistics and Chi-Square tests

for bivariate analysis. Statistical significance was determined at $p < 0.05$.

Results And Discussion

This study aimed to determine the relationship between the use of hormonal injectable contraception and the incidence of vaginal discharge among contraceptive acceptors. Scientific findings were obtained from the analysis of 41 respondents using injectable contraception at the Independent Midwife Practice of Rini Susi Safitri, Huta I, Pematang Kerasaan, Simalungun Regency.

a. Characteristics of Respondents

Tabel 1. Characteristics of Respondents by Age and Education

Characteristic	Frequency (f)	Percentage (%)
Age		
21–35 years	29	70.7
>35 years	12	29.3
Education		
Elementary School	2	4.9
Junior High School	2	4.9
Senior High School	30	73.2
Diploma/S1	7	17.1

The majority of respondents were in the reproductive age range (21–35 years), accounting for 70.7%. This finding aligns (Cahyani, 2023) who stated that women of reproductive age are more likely to use hormonal contraceptives and are more susceptible to vaginal discharge (leukorrhea).

Additionally, 73.2% of respondents had a senior high school education, supporting the idea that education level significantly influences understanding and acceptance of contraceptive use and side

effects, including discharge (Sianipar *et al.*, 2024)

2. Characteristics by Occupation and Parity

Table 2. Characteristics of Respondents by Occupation and Parity

Characteristic	Frequency (f)	Percentage (%)
Occupation		
Housewife	14	34.1
Private Employee	11	26.8
Civil Servant	4	9.8
Entrepreneur	12	29.3
Parity		
1 child	9	22.0
2 children	16	39.0
3 children	14	34.1
>4 children	2	4.9

Most respondents were housewives (34.1%) and had 2 children (39%). Parity often correlates with contraceptive use decisions, especially when families believe that two children are sufficient. This supports the KB (Family Planning) program slogan "Two Children Are Enough" and is consistent with findings by (Emha *et al.*, 2024)

3. Type of Hormonal Injectable Contraception

Table 3. Types of Injectable Contraceptives Used

Type of Injectable Contraceptive	Frequency	Percentage (%)
1-month Injection	13	31.7
3-month Injection	28	68.3

The 3-month injectable contraceptive was the most commonly used type (68.3%), due to its practicality and less

frequent administration. However, it contains higher doses of progestin, which can disturb vaginal flora and pH balance factors associated with increased risk of abnormal vaginal discharge.

4. Incidence of Vaginal Discharge

Table 4 Incidence of Vaginal Discharge among Respondents

Vaginal Discharge	Frequency	Percentage (%)
Yes	24	58.5
No	17	41.5

58.5% of respondents experienced vaginal discharge. This finding aligns with (Susila, 2018) who found that hormonal contraceptive users are more prone to discharge due to estrogen and progestin hormonal influence, which affects vaginal mucosa and immune response.

5. Duration of Contraceptive Use

Table 5. Duration of Injectable Contraceptive Use

Duration of Use	Frequency	Percentage (%)
>1 year	24	58.5
<1 year	17	41.5

Longer duration of use (>1 year) was reported by 58.5% of respondents. This prolonged exposure to hormonal contraceptives increases the risk of side effects like leukorrhea due to the prolonged hormonal disturbance in the vaginal environment.

b. Bivariate Analysis

Table 1.6. Relationship between Duration of Use and Vaginal Discharge

Duration of Use	No Discharge	Discharge	Total	P Value
>1 year	2	22	24	

<1 year	15	2	17	0.00
Total	17	24	41	5

The Chi-square test showed a significant association between duration of injectable contraceptive use and vaginal discharge ($p = 0.005 < 0.05$). Respondents who used injectable contraceptives for more than one year were significantly more likely to experience discharge (91.6%) compared to those who used it for less than one year. These results confirm the research hypothesis and are consistent with (Dewi *et al.*, 2023) who found that high estrogen levels from long term hormonal use increase the likelihood of abnormal discharge.

Conclusion

This study aimed to examine the relationship between the use of hormonal injectable contraception and the incidence of vaginal discharge among family planning (FP) acceptors at the Private Midwifery Practice of Rini Susi Safitri, Huta I, Pematang Kerasaan, in 2024. Based on the data analysis, there was a significant association between the duration of injectable contraceptive use and the occurrence of vaginal discharge. Acceptors who had used injectable contraceptives for more than one year were more likely to experience vaginal discharge compared to those who had used them for less than one year.

The scientific finding of this research indicates that prolonged exposure to hormones can lead to physiological changes in the reproductive tract, thereby increasing the risk of pathological vaginal discharge. The high levels of progestin in three-month injectable contraceptives,

combined with continuous usage, may disrupt the natural vaginal flora balance. As a suggestion for future research, it is recommended to investigate further the specific types of vaginal discharge (physiological or pathological) using clinical and laboratory approaches. Additionally, expanding the study population and location may provide more representative results that can support educational efforts on safe contraceptive use tailored to women's reproductive health conditions.

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