



Original Research

Relationship between Duration of Use of 3 Months Injectable Contraceptives and Weight Gain of KB Acceptors

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Abstract

3-month injectable contraception is one of the family planning (KB) methods that is widely used in Indonesia. However, long-term use is often associated with side effects, one of which is weight gain. This can occur due to hormonal changes that affect body metabolism and appetite. Uncontrolled weight gain can increase the risk of obesity and other metabolic diseases. Therefore, research is needed to determine the relationship between the duration of use of 3-month injectable contraception and weight gain in KB acceptors. This study aims to analyze the relationship between the duration of use of 3-month injectable contraception and weight gain in KB acceptors. This study used a quantitative method with a cross-sectional design. The number of respondents in this study was 57 3-month injectable contraceptive acceptors selected using a purposive sampling technique. Data were collected through weight measurement and interviews using a questionnaire. Data analysis was carried out using the chi-square test to determine the relationship between the duration of use of 3-month injectable contraception and weight gain. Results: The results showed that there was a significant relationship between the duration of use of 3-month injectable contraception and weight gain in KB acceptors. The chi-square test results obtained a p-value = 0.007, which is smaller than the significance level of 0.05. This shows that the longer an acceptor uses a 3-month injection, the greater the likelihood of experiencing weight gain. There is a significant relationship between the duration of use of a 3-month injection and weight gain in family planning acceptors. The longer the use of a 3-month injection, the greater the risk of weight gain. Education is needed for family planning acceptors regarding the side effects of a 3-month injection, especially related to weight gain. Health workers are expected to provide assistance in monitoring body weight and provide recommendations for a healthy lifestyle, such as maintaining a diet and exercising regularly. In addition, for acceptors who experience significant weight gain, it is advisable to consult with health workers to consider alternative contraceptive methods that are more appropriate.

1. Introduction

Family Planning (KB) is one of the government's efforts to control the birth rate and improve maternal and child health. One of the most widely used contraceptive methods in Indonesia is

the 3-month injectable. This contraceptive contains the hormone progesterone which functions to prevent ovulation, thicken cervical mucus, and thin the endometrium, thereby preventing pregnancy (Ministry of Health of the Republic of Indonesia, 2021). Although effective in preventing pregnancy, the use of 3-month injectables is often associated with several side effects, one of which is weight gain in KB acceptors (Wahyunil et al., 2022).

Weight gain experienced by users of 3-month injectables can be caused by various factors, especially hormonal changes that affect metabolism and appetite (Yulianil & Rahayu, 2020). The progesterone hormone in injectable contraceptives can cause fluid retention and increased body fat mass, which ultimately contributes to weight gain (Nugroho et al., 2021). In addition, changes in diet and physical activity are also supporting factors in the process of weight gain in KB acceptors (Fitriani et al., 2023).

Several studies have shown that the longer a woman uses a 3-month injectable, the greater the likelihood of experiencing weight gain (Sari et al., 2021). The length of use of injectable contraceptives is associated with the accumulation of the effects of the hormone progesterone which can slow down metabolism and increase body fat storage (Putri & Anggrainil, 2022). This can lead to the risk of obesity and other metabolic diseases if not balanced with a healthy lifestyle (Rahmawati & Suryadi, 2020).

Weight gain due to the use of 3-month injectables can be a special concern for KB acceptors, especially for those who have a history of obesity or metabolic diseases such as diabetes and hypertension (Handayani et al., 2022). Therefore, it is important for health workers to provide education to family planning acceptors regarding these risks and preventive measures that can be taken, such as maintaining a healthy diet and increasing physical activity (Pratiwi & Lestari, 2023).

This study was conducted to determine the relationship between the duration of use of 3-month injectable contraceptives and weight gain in family planning acceptors. The results of this study are expected to be a basis for health workers in providing education to family planning acceptors and assisting in decision-making regarding the selection of contraceptive methods that are appropriate to the individual's health condition (Yulianti et al., 2021).

In addition, the results of this study are also expected to provide a clearer picture of the impact of long-term hormonal contraceptive use on body weight, so that it can be used as a consideration in a healthier and more sustainable family planning program (Putra & Dewi, 2022). With more accurate information regarding the relationship between 3-month contraceptive injectables and weight gain, it is hoped that contraceptive acceptors can better understand the risks that may occur and can take appropriate preventive measures (Astuti & Handayani, 2023).

Based on this background, this study aims to analyze the relationship between the duration of use of 3-month contraceptive injectables and weight gain in contraceptive acceptors. With this study, it is hoped that it can contribute to the development of better family planning program policies and increase acceptor awareness in maintaining health while using 3-month contraceptive injectables.

2. Research Method

This study used a quantitative method with a cross-sectional design. The number of respondents in this study was 57 3-month injectable contraceptive acceptors selected using a purposive sampling technique. Data were collected through weight measurement and interviews using a questionnaire. Data analysis was carried out using the chi-square test to determine the relationship between the duration of use of 3-month injectable contraceptive and weight gain.

3. Results and Discussion

3.1. Result

Table 1 Respondent Characteristics

Information	Frequency	Percent
Use of 3 Monthly Injectable Birth Control		
> 1 year	34	59.6
1 year	23	40.4
Weight gain		
There is weight gain	47	82.5
No weight gain	10	17.5
Total	57	100.0

From table 1, it can be seen that the majority of respondents used contraception for more than 1 year (34 (59.6%)) and a small number of respondents used it for 1 year (23 (40.4%)) and respondents who experienced weight gain were 47 (82.5%) and those who did not experience weight gain were 10 (17%).

Table 2 Crosstab

			Weight gain		Total
			There is weight gain	No weight gain	
Use of 3 Monthly Injectable Contraceptives	> 1 Year	Count	32	2	34
		Expected Amount % in Use of 3 Monthly Injectable Contraceptives	28.0 94.1%	6.0 5.9%	34.0 100.0%
	1 Year	Count	15	8	23
		Expected Amount % in Use of 3 Monthly Injectable Contraceptives	19.0 65.2%	4.0 34.8%	23.0 100.0%
Total		Count	47	10	57
		Expected Amount % in Use of 3 Monthly Injectable Contraceptives	47.0 82.5%	10.0 17.5%	57.0 100.0%
Uji Chi Square			0.007		

In table 2, the chi square test was obtained $0.007 < 0.05$, meaning that H_0 was rejected and H_1 was accepted, meaning that there is a relationship between the length of use of 3-month injectable contraceptives and the increase in body weight of KB acceptors.

3.2. Discussion

The results of the study showed that there was a significant relationship between the duration of use of 3-month injectable contraception and weight gain in family planning acceptors. From the results of the chi-square test, a p-value of 0.007 was obtained, which was smaller than the significance level of 0.05. This means that H_0 is rejected and H_1 is accepted,

which indicates that the longer an acceptor uses 3-month injectable contraception, the greater the likelihood of experiencing weight gain. These results are in line with previous studies showing that long-term use of injectable contraception is correlated with weight changes due to the influence of the hormone progestin (Wahyunil et al., 2022).

3-month injectable contraception contains depo medroxyprogesterone acetate (DMPA), a form of the hormone progestin that works by suppressing ovulation and increasing the thickness of cervical mucus (Ministry of Health of the Republic of Indonesia, 2021). However, long-term use of this contraceptive is often associated with changes in body metabolism, including increased fluid retention and changes in body fat distribution that contribute to weight gain (Yulianil & Rahayu, 2020).

The mechanism of weight gain in users of 3-month injectable contraceptives is mainly due to hormonal changes. The hormone progestin can increase appetite and inhibit lipolysis, thereby causing an increase in body fat mass (Sari et al., 2021). In addition, this hormone can also interfere with carbohydrate and fat metabolism, which ultimately contributes to weight gain if not balanced with a healthy lifestyle (Nugroho et al., 2021).

Several studies have shown that the duration of use of 3-month injectable contraceptives is associated with an increase in body mass index (BMI). A study conducted by Putri & Anggrainil (2022) found that users of injectable contraceptives for more than one year had a higher risk of weight gain compared to those who had just started using this contraceptive method. The longer a person uses injectable contraceptives, the greater the likelihood of experiencing weight changes due to the accumulation of hormonal effects that occur in the body.

In addition to hormonal factors, lifestyle changes also play a role in weight gain in 3-month injectable contraceptive users. Many users of this contraceptive experience decreased physical activity and changes in unhealthy eating patterns, such as increased consumption of high-calorie, low-fiber foods (Rahmawati & Suryadi, 2020). The combination of hormonal changes and unhealthy lifestyle habits can accelerate weight gain in contraceptive users.

Significant weight gain can have a negative impact on health, especially if not managed properly. A study conducted by Handayani et al. (2022) showed that weight gain due to the use of 3-month injectable contraceptives can increase the risk of obesity, hypertension, and other metabolic disorders. Therefore, it is important for health workers to provide education to contraceptive users about these side effects and preventive measures that can be taken.

One way to reduce the risk of weight gain is to provide education about healthy eating patterns and the importance of physical activity. According to Pratilwi & Lestari (2023), injectable contraceptive users who implement a balanced diet and exercise regularly have more controlled weight gain compared to those who do not do physical activity regularly. Therefore, a comprehensive approach is needed in the family planning program to minimize the side effects that may occur.

In addition, regular consultation with health workers is highly recommended for 3-monthly injectable contraceptive acceptors. Regular weight checks can help monitor changes that occur and allow early intervention if significant weight gain occurs (Yulianti et al., 2021). With good monitoring, family planning acceptors can better understand their body condition and take appropriate steps to maintain their health.

For acceptors who experience significant weight gain, it is important to consider alternative contraceptive methods that are more appropriate to their physical condition and individual needs. For example, non-hormonal contraception such as the IUD (Intrauterine Device) can be an option for those who want to avoid the side effects of weight gain (Putra & Dewi, 2022). The choice of contraceptive method must be adjusted to the health conditions, preferences, and lifestyle of the family planning acceptor.

In addition to physical health aspects, weight gain can also have an impact on the psychological condition of family planning acceptors. Many women experience stress and lack of self-confidence due to the weight gain they experience after using the 3-month injectable contraceptive (Astuti & Handayani, 2023). Therefore, support from the Health and family support is essential to help acceptors manage these changes in a healthy and positive way.

In this study, most respondents who had used 3-month injectable contraception for more than a year experienced greater weight gain compared to those who used it for a shorter period

of time. This suggests that the accumulation of hormonal effects plays an important role in weight changes that occur in long-term users (Filtrilani et al., 2023).

The results of this study reinforce previous findings that 3-month injectable contraception can contribute to weight changes, especially in users who have used this contraception for a long time (Wahyuni et al., 2022). Therefore, prevention and education efforts must continue to be improved so that contraceptive users can better manage their weight changes.

Based on these findings, health workers at the are advised to integrate nutrition and physical activity education programs into family planning services. Thus, KB acceptors can be better prepared to face the possible side effects of the contraception they use and can maintain their health more optimally (Ministry of Health of the Republic of Indonesia, 2021).

In conclusion, this study shows that there is a significant relationship between the duration of use of 3-month injectable KB and weight gain in KB acceptors. Therefore, more effective interventions are needed to help acceptors manage their weight changes and avoid more serious health risks.

4. Conclusion

Based on the results of the study, it can be concluded that there is a significant relationship between the duration of use of 3-month injectable contraceptives and weight gain in KB acceptors. The results of the chi-square test showed a p-value = 0.007, which is smaller than the significance level of 0.05. This means that the longer an acceptor uses 3-month injectable contraceptives, the greater the likelihood of experiencing weight gain.

Weight gain that occurs in users of 3-month injectable contraceptives is thought to be related to hormonal changes due to the use of progestin, which can affect body metabolism, increase appetite, and cause fluid retention and accumulation of body fat. In addition, unhealthy eating patterns and lack of physical activity also contribute to weight gain in KB acceptors.

The results of this study strengthen previous findings which state that long-term use of hormonal contraceptives can have an impact on weight changes, which have the potential to increase the risk of obesity and other metabolic disorders such as hypertension and diabetes. Therefore, regular monitoring of the weight of KB acceptors and education about healthy lifestyles are very important to reduce the negative impacts of using 3-month injectable KB.

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