

The Correlation Between Weight Gain in Dmpa Injectable Contraceptive Acceptors and Their Characteristics at the Miracle Clinic

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ABSTRACT

Injectable contraceptive method is one method of contraception which contributed substantially in prevention programs, especially in the matter of population planning program. Contraception contraceptive injection is given intramuscularly by injection in the buttock muscle (gluteus maximus), and consists of two types of DMPA (Progesterone Acetate Depomedroksi) and NET-EN (Noretindro Enanatat) Noresterat. The goal is to determine the relationship of Weight Increase Acceptor KB

Injectable DMPA is reviewed based on characteristics such as mother, parity, age and Education. This research is a descriptive correlative with cross sectional design. Each study subject is observed only once and measurements were made on the status of the character or object variable at the time of examination. Fetching data from registers KB since January - June 2026, with a population of 90 people, the total sample using sampling ie 90 Mothers who use DMPA Injectable 4 times.

The results showed almost half of the respondents (34.78%) who experienced a weight gain of 1-2 kg. that there is a relationship of weight gain injectable DMPA acceptors in the review of the characteristics.

Based on the research results, the researchers suggest that health personnel all health institutions need to do a repair of the system by promoting family planning services, family planning services and contraceptives election

KEYWORDS: characteristics, injectable DMPA acceptors, weight gain

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INTRODUCTION

The development of contraceptive technology from year to year has progressed rapidly. One of the main goals of contraceptive research is to develop a long-acting contraceptive method that does not require daily use or use prior to every sexual intercourse, yet remains reversible.

Contraception is an effort to prevent pregnancy resulting from the union of an egg and a sperm. This effort can be temporary or permanent. Meanwhile, Family Planning (KB) is defined as actions that help married couples regulate intervals between pregnancies, provide pregnancy counseling, determine the number of children, and control the timing of pregnancy¹.

The injectable contraceptive method is one of the contraceptive methods that contributes significantly to the population problem control program, particularly within the family planning (KB) program. The injectable contraceptive

method has also become part of the national family planning movement, and its enthusiasts are increasing. This is because injectable contraceptives are safe, simple, effective, and can be used during the postpartum period. Some frequently used injectable contraceptives include Depo Medroxyprogesterone Acetate (Depoprovera / DMPA), Norethisterone Enanthate (NET-EN), and Cyclofem.²

To date in Indonesia, the coverage of active family planning participants has reached 60.3% (2002 IDHS), which is the highest achievement among ASEAN countries. However, the methods utilized are predominantly short-term methods such as pills and injections. According to the 2002 IDHS data, family planning acceptors using injections accounted for 21.1%, pills 15.4%, IUDs 8.1%, implants 6%, tubectomy 3%, vasectomy 0.4%, and condoms 0.7%.¹

Injectable contraceptives have both advantages and disadvantages. The advantages of injectable contraceptives

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include being effective, not interfering with sexual intercourse, and eliminating the need to store the injectable medication. The disadvantages of injectable contraceptives include disrupted menstrual patterns such as amenorrhea, menorrhagia, and spotting, a delayed return to fertility after discontinuing use, and weight gain².

Weight gain is the most frequently complained issue by injectable contraceptive acceptors. Based on a preliminary study of DMPA contraceptive users at the Miracle Clinic in December 2025, there were 35 DMPA users. Out of these 35 DMPA users with an injection frequency of more than 4 times, 10 mothers experienced weight gain. Based on the background above, the researcher is interested in conducting a scientific study to determine the correlation between weight gain in DMPA injectable contraceptive acceptors and their characteristics at the Miracle Clinic.

The research objective is to determine the amount of weight gain in family planning injectable contraceptive acceptors and the mothers' characteristics

LITERATURE REVIEW

Contraception is an effort to prevent pregnancy. This effort can be temporary or permanent. The use of contraception is one of the variables that affect fertility. Contraceptive devices that are of good quality must at least possess the following characteristics: high efficacy, safety, aesthetics, ease of availability, not requiring continuous motivation, and having minimal side effects.²

Depo-Provera is a 6-alpha-medroxyprogesterone used for parenteral contraceptive purposes, possessing a strong progestogenic effect and being highly effective. Noresterat also belongs to this class.³

Depo Medroxyprogesterone Acetate is available in the form of a microcrystalline suspension. One week after an injection of 150 mg, peak levels are achieved, then the levels remain high for 2 to 3 months, before declining again. With long-term use, there is no cumulative effect of DMPA in the blood/serum.³

The mechanism of action of DMPA injectable contraception includes: suppressing ovulation, thickening cervical mucus to reduce sperm penetration ability, inhibiting gamete transport by the fallopian tubes, and thinning and atrophying the uterine lining to disrupt implantation.³

Injectable contraceptives have high efficacy, with less than 1% of 100 women experiencing pregnancy within 1 year of DMPA use. Injectable contraceptives are as effective as Combined Oral Contraceptive Pills (COCs) and more effective than IUDs. However, this effectiveness can only be maintained if the injections are administered regularly according to the predetermined schedule..²

One of the side effects of the injection method is weight gain. Generally, the weight gain is not overly significant, varying between less than one kilogram to five kilograms in the first year. The cause of this weight gain remains unclear. It appears

to occur due to an increase in body fat, rather than body fluid retention.⁵

Experts hypothesize that DMPA (Depot Medroxyprogesterone Acetate) stimulates the appetite control center in the hypothalamus, causing acceptors to eat more than usual. Women who use Depot Medroxyprogesterone Acetate (DMPA), otherwise known as the three-monthly injectable contraceptive, experience an average weight gain of 11 pounds or 5.5 kilograms and an increase in body fat of 3.4% within three years of use, according to a study conducted by the University of Texas Medical Branch (UTMB). Meanwhile, the side effect on weight with monthly injectable contraceptives is very mild, generally resulting in minimal weight gain. The primary side effect of DMPA use is weight gain.⁶

A study reported a weight gain of more than 2.3 kilograms in the first year and subsequently increased gradually to reach 7.5 kilograms over six years. Meanwhile, with the use of Cyclofem, weight increased by an average of two to three kilograms in the first year of use and continued to gain during the second year. Fundamentally, weight changes are influenced by several factors. Generally, these factors can be divided into two major categories: internal factors and external factors.⁶

METODE PENELITIAN

The subjects of this study were DMPA injectable contraceptive acceptors with an injection frequency of 4 times who met the research inclusion and exclusion criteria. The population in this study included the target population, which comprised all DMPA contraceptive users with an injection frequency of 4 times. The accessible population consisted of DMPA contraceptive users with an injection frequency of 4 times from January 2026 to June 2026, totaling 90 people. The sample size in this study was the total population, which included 90 DMPA contraceptive users with an injection frequency of 4 times from January 2026 to June 2026. This research is an analytical study using a cross-sectional approach, which aims to study the dynamics of the correlation between risk factors and effects through an approach, observation, or data collection conducted simultaneously at one point in time.¹¹

In this study, the researcher aims to determine the correlation between weight gain and DMPA injectable contraceptive acceptors in terms of their characteristics. Data processing is conducted using computer techniques, and the data are subsequently entered into tables. Once the obtained data are classified, they are analyzed. The data analysis performed is univariate analysis. After the data are analyzed, they are then connected with theories related to the research problem and presented in the form of distributions. Since this variable utilizes categorical variables, the Chi-Square test is used to prove the existence of a correlation and to test the hypothesis between the independent variable and the

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dependent variable.

PEMBAHASAN

Based on the study, nearly half of the respondents (34.78%) experienced a weight gain of 1–2 kg. This indicates that most of the respondents (56.90%) were aged 20–35 years and experienced a weight gain of 1–2 kg. The correlation value between age and weight gain showed that the calculated Chi-Square value (17.330) > table Chi-Square value (12.592) and the p-value (0.008) < (0.05), which means there is a significant correlation between age and weight gain among DMPA injectable contraceptive acceptors. Most of the respondents (58.14%) had 2–4 children and experienced a weight gain of 1–2 kg.

Based on the study, most of the respondents (54.39%) had secondary education and experienced a weight gain of 1–2 kg. The correlation value between education and weight gain showed that the calculated Chi-Square value (19.471) > table Chi-Square value (12.592) and the p-value (0.003) < (0.05), meaning that there is a significant correlation between education and weight gain among DMPA injectable contraceptive acceptors. This result indicates that DMPA contraceptive acceptors experience more weight gain than non-DMPA contraceptive acceptors. The findings of this study demonstrate that DMPA usage only increases the risk of weight gain. According to Saifuddin (2006), the risk of weight gain is likely due to the progesterone hormone, which facilitates the conversion of carbohydrates and sugars into fat, thereby increasing subcutaneous fat. In addition, the progesterone hormone also increases appetite and decreases physical activity; consequently, the use of injections can lead to weight gain. Generally, the weight gain is not overly significant, varying from less than 1 kg to 5 kg in the first year of injection. The cause of this weight gain remains unclear. It appears to occur due to an increase in body fat, rather than body fluid retention. Based on the study regarding the acceptors' age, it indicates that most of the respondents (64.44%) were between 20 and 35 years old.

According to Hartanto (2004), the wife's age period between 20 and 35 years old is the optimal age period for childbirth, with an ideal number of 2 children and an inter-pregnancy interval of 2 to 4 years. During this age phase, a type of contraception with high efficacy and high reversibility is required because participants still expect to have more children, and it can be used for 2 to 4 years in accordance with the planned pregnancy interval. The results show that the average duration of DMPA contraceptive use is more than 1 year, typically by the 4th injection. Choosing DMPA contraception is a rational choice compared to other family planning methods; in addition to being suitable for this age group, DMPA contraception is highly economical, making it affordable for all levels of society. This is the underlying reason why individuals over 30 years old with 2 children prefer DMPA contraception over other types of contraception. With DMPA, fertility may

only return 1 year after the injections are discontinued, but DMPA does not cause permanent infertility. Contraceptive injections can cause mild weight gain.

The effect of DMPA contraceptive use on weight gain: Depo-Provera is a 6-alpha-medroxyprogesterone used for parenteral contraceptive purposes, possessing a strong progestogenic effect and being highly effective. In long-term DMPA use (up to two years), it contributes to triggering weight gain, cancer, vaginal dryness, emotional disturbances, and acne, as prolonged hormonal use can disrupt the balance of estrogen and progesterone in the body, leading to the transformation of normal cells into abnormal cells. Based on the study regarding the acceptors' parity, it indicates that nearly half of the respondents (47.78%) had a parity of 2–4 children.

Parity indicates the number of previous pregnancies that have reached viability and have been delivered, regardless of the number of children. Twin births are counted as only one parity. Parity is the frequency with which a mother has given birth to a child, alive or dead, excluding abortions. Furthermore, the levels of parity are described as follows: primigravida refers to a mother who has been pregnant once, multigravida refers to a mother who has been pregnant 2–4 times, and grande multigravida refers to a mother who has been pregnant 5 times or more. Parity levels have attracted significant attention from researchers in relation to maternal and child health. This is because there is a tendency for the health of mothers with low parity to be better than those with high parity.

The education level of the acceptors indicates that most of the respondents (63.33%) had a secondary education as their highest level of education. Based on the table, it can be determined that the most dominant educational level for DMPA contraceptive acceptors is secondary education, accounting for 57 respondents (63.33%). Education refers to the formal schooling level completed by the mother. A mother's educational status significantly influences her behavior, which subsequently affects her nutritional status during pregnancy and childbirth. Mothers with higher education tend to be more active in seeking and obtaining information regarding antenatal, delivery, and postpartum care. Conversely, those with low education find it difficult or are reluctant to seek information and utilize antenatal care services. Individuals in the low education group often cannot make decisions independently, are unemployed, lack financial means, and have a poor understanding of healthy lifestyles, which can negatively affect maternal health conditions and fetal growth in the womb. Low education causes an individual to be indifferent toward health programs, leaving them unaware of any dangerous conditions they might experience and the warning signs that arise.

Based on Table 4.5, it can be seen that nearly half of the respondents (34.78%) experienced a weight gain of 1–2 kg. This indicates that most of the respondents (56.90%) were aged

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20–35 years and experienced a weight gain of 1–2 kg. The correlation value between age and weight gain showed that the calculated Chi-Square value (17.330) > table Chi-Square value (12.592) and the p-value (0.008) < (0.05), which means there is a significant correlation between age and weight gain among DMPA injectable contraceptive acceptors

Based on the study, it can be seen that most of the respondents (58.14%) had 2–4 children and experienced a weight gain of 1–2 kg. The correlation value between parity and weight gain showed that the calculated Chi-Square value (20.208) > table Chi-Square value (12.592) and the p-value (0.003) < (0.05), which means there is a significant correlation between parity and weight gain among DMPA injectable contraceptive acceptors. Furthermore, based on the study, it can be seen that most of the respondents (54.39%) had secondary education and experienced a weight gain of 1–2 kg. The correlation value between education and weight gain showed that the calculated Chi-Square value (19.471) > table Chi-Square value (12.592) and the p-value (0.003) < (0.05), meaning that there is a significant correlation between education and weight gain among DMPA injectable contraceptive acceptors.

CONCLUSION

Based on the research results regarding weight gain in DMPA injectable contraceptive acceptors in terms of their characteristics, it can be concluded that:

1. Most of the respondents (64.44%) were aged between 20 and 35 years.
2. Nearly half of the respondents (47.78%) had a parity of 2–4 children.
3. Most of the respondents (63.33%) had secondary education as their highest level of education.
4. Most of the respondents (53.33%) experienced a weight gain of 1–2 kg after using the DMPA injectable contraceptive.
5. Most of the respondents (56.90%) were aged 20–35 years and experienced a weight gain of 1–2 kg, meaning that there is a significant correlation between age and weight gain among DMPA injectable contraceptive acceptors at BPM N in the Working Area of Cibeureum Health Center in 2013.
6. Most of the respondents (58.14%) had 2–4 children and experienced a weight gain of 1–2 kg, meaning that there is a significant correlation between parity and weight gain among DMPA injectable contraceptive acceptors at BPM N in the Working Area of Cibeureum Health Center in 2013.
7. Most of the respondents (54.39%) had secondary education and experienced a weight gain of 1–2 kg, meaning that there is a significant correlation between education level and weight gain among DMPA injectable contraceptive acceptors at BPM N in the Working Area of Cibeureum Health Center in 2013.

This study can serve as a consideration for further research by involving a larger number of respondents and incorporating additional variables, such as age, dietary intake, lifestyle, physical activity, and others. Furthermore, all healthcare institutions need to improve their family planning service systems by promoting family planning services and the proper selection of contraceptive methods..

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