

# The relationship of use of injection contraception with age menopause in the sub-district of Gung Negeri Kabanjahe

**Alfrienne**

Midwifery, Politeknik Kesehatan Kementerian Kesehatan Medan, Indonesia

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## ABSTRACT

The incidence of menopause in women aged 40-58 years which can occur early or late. One of the factors that influence menopausal women's entry into hormonal contraception. The aim is to determine the relationship between the use of injectable birth control and the age of menopause in the Gung Negeri Kabanjahe sub-district. This study was a cross-sectional design with an analytic survey approach. The research has conducted a total of 105 respondents using the chi square statistical test. The results of the study were 42 respondents (66.7%) who used injectable contraceptives < 3 years experienced menopause at the age of < 49 years, while 21 respondents (33.3%) experienced menopause at the age of ≥ 49 years. While the use of injection contraception ≥ 3 years experienced menopause at the age of < 49 years by 18 respondents (42.9%), menopausal age ≥ 49 years by 24 respondents (57.1%). The results of statistical data using the chi-square test found that p value = 0.016 < 0.05 indicating that there was a relationship between the use of DMPA injection contraception (Depo Medroxy Progesterone Acetate) and the incidence of menopause in the Gung Negeri Kabanjahe sub-district. The conclusion of this study is that there is a relationship between the use of DMPA injection contraception (Depo Medroxy Progesterone Acetate) and the incidence menopause in the Gung Negeri Kabanjahe sub-district which has a significant level of closeness.

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### Corresponding Author:

Alfrienne,  
Midwifery,  
Politeknik Kesehatan Kementerian Kesehatan Medan,  
Jl. Jamin Ginting No.13,5, Lau Cih, Kec. Medan Tuntungan, Medan, 20133, Indonesia  
Email: [alfrienne1@gmail.com](mailto:alfrienne1@gmail.com)

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## INTRODUCTION

The average age of young women who experience their first menstruation is 12.5 years. Age does vary based on heredity, nutrition and health in general. However, it is believed that the age at first menstruation can be changed by environmental factors such as nutrition and heredity (Febriana et al. 2021; Melinda 2017; Novrica et al. 2019). In addition, statistics show that the age at menarche is influenced by genes passed down through heredity. Premenopausal age is easy to diagnose and is caused by various factors, including nutritional disorders, chronic diseases and diseases that damage ovarian tissue and overall health. Menopause is caused by various factors including the age of the

man who experiences it, genetics, chronic disease and lifestyle problems (Dieny and Rahadiyanti 2019; Febrianti 2020; Larasati 2018).

In general, at the age of 45 to 50 years, menopause occurs. But it can also occur in your 30s or even older than 50 years. This is called early menopause (Sri Atin 2017). Women who experience early menopause have a higher risk of complications such as osteoporosis and heart problems. Conversely, late menopause is associated with an increased risk of further investigations. Estrogen produced by ovarian tumors can be associated with late menopause. Endometrial carcinoma can occur when women experience menopause late (Agustina 2020; Nurrahmaton 2020; Sebtalesy and Irmawati Mathar 2019).

Of the total population of Indonesia, around 15% are women aged between 50 and 55 years. This was determined by the 2012 Indonesian Health Demographic Survey. In addition, around 30.3 million women in this age range are estimated to live in Indonesia. The Central Bureau of Statistics for Karo Regency (Angka 2017) reported that the population of Kabanjahe Regency at the end of 2011 was 63,918 people, including 46,876 women aged 45 to 50 years. Also, about 5,886 people in this age group entered menopause. However, women aged 45 to 55 years used the most contraception in the form of injectable contraception because they had 312 family planning supporters out of 1,018 acceptors.

Research (Hanasiwi and Pertiwi 2015; Ismail, Kadir, and Amalia 2023; Sasmita, Santoso, and Widyastuti 2019) states that using injectable contraception women will face delayed menopause. Conversely, using oral contraceptives women will face early menopause. 42.8% of respondents who used oral contraceptives reported early menopause. Meanwhile, injection contraception causes menopausal age of 47.2%.

According to research (Masruroh and Uliyatul 2018) found that out of 55 respondents, 31 did not use any hormonal contraception. In addition, 24 respondents used hormonal contraception. Of the 24 respondents who used hormonal contraception, 9 were women who experienced normal menopause in their 40s (37.5%) and 15 were women who experienced late menopause for no apparent reason (62.5%). None of the 24 respondents who used hormonal contraception experienced early menopause.

In an initial survey conducted by researchers in Gung Negeri and Kabanjahe Districts, 526 female residents aged 45 to 55 years were found. One postmenopausal mother admitted stated that she had been given Depo Medroxy Progesterone Acetate, or DMPA, for five years after she gave birth to a child at the age of 27. During her time as an injecting mother, her irregular menstruation returned after she was 38 years old. At the age of 39, the mother had never experienced a menstrual cycle. However, recently she started having Menstrual Synchronicity defined as scanty and irregular menstruation when she is injected with birth control pills. Two of the older women also used injectable birth control and maintained regular menstrual cycles for more than 5 years after menopause. The aim of the study was to determine the relationship between the use of injectable birth control and age menopause in the village of Gung Negeri Kabanjahe. This research is expected to add to the researchers' insight and knowledge about the relationship of contraception to age menopause, so that it can apply in service in the field.

## RESEARCH METHOD

The research location was carried out in Gung Negeri Kabanjahe Village, Kabanjahe District, Karo Regency. This type of research uses the method analytical *survey* with approach *cross sectional*, a research approach in which the independent variable and the dependent variable are observed simultaneously at the same time, to determine age differences menopause in respondents who use injectable contraception. The sample in this study were all mothers who had menopause and had used the DMPA injection in the Gung Negeri Kabanjahe Village from February to August 2013 using teknik purposive sampling.

So the number of samples taken in this study were 105 respondents. With the following inclusion criteria: (a) Already menopause (Stop menstruation), (b) Reproductive period using DMPA injectable contraception, (c) Never experienced a liftovary, (d) Be prepared to be a respondent.

In conducting research, researchers conducted interviews with respondents and then asked for approval as respondents by giving and conveying goals to respondents. Then the researcher explained the questionnaire that would be used as a data collection tool. After being given an explanation of how to fill questionnaire, Respondents filled out 2 questions containing the duration of using injectable contraceptives and the age of the mother when menopause. Data analysis will be carried out using univariate analysis to see the table of frequency and percentage of variables and bivariate to see the relationship between the two variables using statistical tests *Chi-Square*, with ( $\alpha=0,05$ ) as well *significant* 95%.

## RESULTS AND DISCUSSIONS

### **Length of use of injectable contraceptives**

Injectable birth control is most often used by babies under the age of three. Of the 105 mothers using this method, 66.7% answered survey questions. Research (Hasibuan, 2020; Muhajir, 2017; Wahid, 2016) found that samples using injectable contraceptives took longer to enter menopause. At 59.1%, this is the margin of difference between the two groups. According to (Febrianti, 2020; Wulan Purnama & Asi, 2017) using birth control products reduces estrogen levels in the body and causes the age of menopause to shift. Injectable contraceptives that contain hormones often have long-term effects on the body. These include irregular menstrual cycles and a longer mature egg so women age at different rates.

### **Menopausal age**

The study found that 57.1% of 105 mothers who used injectable contraceptives experienced menopause before the age of 49. Research (Hardiyanti, 2021; Irfana, 2021; Ramatullah, 2019; Wahyuni, 2019) reveals that injectable contraceptives reduce egg cell production. As a result, they dramatically reduce a woman's egg production. The estrogen and progesterone contained in these contraceptives stimulate the pituitary gland, which affects the ovaries. compared to women who use hormonal contraception, women who do not use injectable contraception experience menopause more slowly.

According to (Ismail et al., 2023; Tiara, 2018) about the causes of menopause. In a sense, this book states that age is determined by how long a woman has used injectable contraception. This is because oral contraceptives have no effect on the ovaries. Menopause occurs at a certain age because egg cells are no longer being produced.

In determining the age of menopause based on several factors, including the age of menarche, use of injectable contraception, and how long a woman has been using contraception. Other influences on the age at menopause include the number of pregnancies, substandard nutritional status, and low intake of vitamins. By tracking these variables, the authors determined that women with a higher number of pregnancies went through menopause at an earlier age than others.

### **Correlation between the use of DMPA injectable contraception and the incidence of agemenopause.**

The results of the study at Gung Negeri Kabanjahe showed that respondents who used injectable contraception aged < 3 years experienced menopause at the age of < 49 years. This was reported by 42 respondents or 66.7% of respondents. In comparison, menopause was reported at age 49 or older for 21 respondents, or 33.3% of respondents. This data was found by studying the local sub-district population.

Statistical data analysis using the chi-square test found that Depo Medroxy Progesterone Acetate, or DMPA, injection users had a higher chance of experiencing menopause than nonusers. The results of this analysis show a p value of  $0.016 < 0.05$  which is considered significant. The relationship between DMPA injection and menopause was observed in Gung Negari District, Kabanjahe.

Long-term injectable contraceptives are known to have a significant effect on the age of menopause (Tendean et al., 2017). This is due to the fact that long-acting injectable contraceptives affect women who use them for 3 years or more, and those who use them for less than 3 years. They did this by using the Chi-square test to analyze their data results (Tyaz, 2021).

Research (Hanasiwi & Pertiwi, 2015; Ismail et al., 2023; Sasmita et al., 2019) revealed that elderly women who use injectable contraception experience menopause more slowly. Follicle stimulating hormone and luteinizing hormone are blocked by Injectable Contraceptives. Doing so prevents the release of the egg, which causes menopause to occur more quickly.

The theory that injecting can cause menopause is proven through research after being embraced by the author. They state that our bodies naturally produce estrogen and progesterone, two hormones essential for women's health. However, with injections, we receive hormones from outside our bodies that can affect the balance of hormones in our ovaries. This results in no egg maturation, which is why the authors believe women use injections to prevent menopause

## CONCLUSION

There is a relationship between the use of DMPA injectable contraception and the incidence of *menopause* in the village of Gung Negari Kabanjahe. History of injecting contraceptive use is related to *agemenopause* because our bodies produce hormones *estrogen* and *progesterone* but with injectable contraception receiving hormones from outside where the injectable contraception works and affects the hormone balance will result in changes in the ovaries so that egg maturation does not occur. This results in changes in the incidence of *agemenopause*. It is expected that midwives who work in Gung Negeri Kabanjahe Village will improve their abilities and skills in providing counseling or KIE (Educational Information Communication) in providing injectable contraceptive services to the public regarding the use of injectable contraception with the incidence of *agemenopause* especially for people of reproductive age. The limitations of this study are on recruitment data, the information provided by respondents through questionnaires sometimes does not show the actual opinions of respondents, this happens because sometimes different thoughts, assumptions and understandings are different for each respondent, as well as other factors such as the factor of honesty in filling out the opinions of respondents in the questionnaire. It is recommended to take more samples, this aims for better data accuracy in the research as well as additional other variables that may also affect many things in this study.

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