

THE USE OF INJECTION CONTRACEPTIVES IS ASSOCIATED WITH CHANGED IN THE MENSTRUAL CYCLE

Marlinda¹, Sumi Anggraeni²

Fakultas Kesehatan Universitas Muhammadiyah Pringsewu
Email : marlinda.muspardi11@umpri.ac.id

ABSTRAK : HUBUNGAN PENGGUNAAN KONTRASEPSI SUNTIK DENGAN PERUBAHAN SIKLUS MENSTRUASI

Latar Belakang Penggunaan alat kontrasepsi bertujuan mencegah terjadinya kehamilan salah satunya dengan metode KB suntik. Kontrasepsi suntik mempunyai permasalahan utama efek samping Pemakaian KB suntik mengalami beberapa permasalahan utama, yaitu gangguan pola menstruasi. Gangguan menstruasi yang terjadi seperti perdarahan bercak, perdarahan irregular, amenorea dan perubahan dalam frekuensi, lama dan jumlah darah yang hilang.

Tujuan penelitian untuk mengetahui hubungan penggunaan kontrasepsi suntik dengan perubahan siklus menstruasi pada akseptor KB suntik di Wilayah Kerja Puskesmas Sukaraja Nuban Lampung Timur.

Metode penelitian ini menggunakan desain survey analitik dengan pendekatan cross sectional. Jumlah populasi 643, didapat 97 sampel dengan tehnik quota sampling. Instrumen yang dipakai kuesioner perubahan siklus menstruasi dan rekam medik penggunaan KB. Analisis data yang menggunakan uji chi square.

Hasil penelitian diketahui bahwa responden yang menggunakan KB suntik 3 bulan (57,7%), dan mengalami perubahan siklus menstruasi (56,7%).

Kesimpulan

Saran Diketahui ada hubungan penggunaan kontrasepsi suntik dengan perubahan siklus menstruasi pada akseptor KB suntik dengan nilai p-value = 0.000 < 0.05 Diharapkan tenaga kesehatan dapat memebri informasi tentang efek samping pemakaian KB suntik 3 bulan, ada hubungan antara lama pemakaian KB suntik 3 bulan dengan gangguan menstruasi, dan menganjurkan klien jika merasa ada gangguan terhadap pemakaian KB suntik 3 bulan untuk mengganti metode kontrasepsi lainnya

Kata Kunci : KB Suntik, Perubahan Siklus Mestruasi

ABSTRACT

Background Contraception is an effort to prevent pregnancy from occurring asexpected to reduce the high birth rate. One type of contraceptive that is the choice of many women of childbearing age today is injecting birth control because it is easy, cheap and many suitable. Injection birth control with the use of estrogen and or progesterone hormones will inhibit the menstrual cycle by affecting the work of the reproductive organs of the uterus and ovaries. This is what is sometimes not realized by the acceptor of birth control, especially when using injection contraceptives in the long term. The impact that is often complained about by acceptors of birth control is an irregular menstrual cycle.

The purpose of the study was to determine the relationship between the use of injection contraceptives and changes in the menstrual cycle in the acceptor of injection birth control.

This research method uses an analytical survey design with a *cross-sectional approach*. The total population was 643, 97 samples were obtained with *quota sampling techniques*. The instruments used are in the form of questionnaires about changes in the menstruation cycle and medical records of the use of kb. Data analysis using *chi square* test.

The results of the study found that respondents partially used injection birth control for 3 months (57.7%), and experienced changes in the mestruation cycle (56.7%).

Conclusion It is known that there is a relationship between the use of injection contraceptives and changes in the menstrual cycle in the acceptor of injection birth control with a p-value = 0.000 < 0.05

Sugesstion It is expected that health workers can provide information about the side effects of using injection birth control and recommend clients if they feel there is a disturbance in the use of injection birth control for 3 months to replace other contraceptive methods

Keywords: Mestruation Cycle Changes, Injection KB

INTRODUCTION

Population growth is a global problem that arises in the world, especially developing countries. Indonesia is the fourth country with the largest population in the world and is one of the countries with the fastest population growth rate in the world. The Central Statistics Agency (BPS) recorded data on the number of people in Indonesia until September 2020 as many as 270.2 million people. This figure increased by 32.57 million people from the total population of Indonesia in 2010 which was only 237.63 million people (BPS, 2020). The increase in population goes hand in hand with a decrease in welfare levels, prompting the government to implement family planning (KB) programs. One of the supports and strengthening of the acceptance of the idea of birth control is the existence of contraceptive services (Hartanto, 2014).

Contraception is an effort to prevent pregnancy from occurring as expected to reduce the high birth rate. The effort can be temporary, it can also be permanent (Wiknjosastro, 2011). Indonesia Health Survey Demography in 2017, had information on the prevalence of contraceptive use in married women aged 15-49 years, the survey results showed that 64% of married women aged 15-49 years used birth control devices, most of whom used modern contraceptive methods 57% and the rest used traditional contraceptive methods 6%. Among the modern birth control methods used, birth control injections are the most used contraceptives 29%, followed by birth control pills 12%. Meanwhile, in Lampung Province, 71.93% is still below Indonesia's target (Zettira&Berawi, 2015).

World Health Organization (WHO) data states that hormonal contraceptives are contraceptives that increase. The coverage of couples of childbearing age is almost 380 million Couple had Family Planning and 65-75 million of them mainly in developing countries use hormonal contraceptives such as pills, injections, and implants. The hormonal contraceptives used can have a negative influence on various female organs, especially in the menstruation cycle, blood spots and weight gain. The most use of hormonal contraceptives was injection contraceptives at 38.3% and pills at 27.7%. In Asia it has increased slightly from 60.9% to 61.8% and in Latin America & Carabia it has remained stable 66.7% (WHO, 2017 in Tendean, Kundre&Hamel, 2017).

The use of injection birth control for 3 months has an impact on the acceptor of birth control with the onset of menstrual disorders in the form of amenorrhea caused by progesterone in the injection birth control component suppresses *Luteinizing*

Hormone (LH). Increased injections of contraceptives used in the blood will inhibit LH, the development of follicles and ovulation over several months. In addition, injection birth control also affects the decrease in *Gonadotropin Releasing Hormone* (GnRH) from the hypothalamus which causes the release of *Follicle Stimulating Hormone* (FSH) and *Luteinizing Hormone* (LH) from the anterior pituitary to decrease (Hartanto, 2014; Prawirohardjo, 2014).

Penurunan FSH will inhibit the development of follicles so that ovulation or fertilization does not occur. Prolonged amenorrhea in progesterone administration is not known to be harmful, and many women can receive it well, but changes in the menstruation cycle need to be considered and watched out for its long-term effects (Yulianti, 2015 in Rilyani, Metri&Minawati, 2018). The impact of physiological cyclical changes such as iron deficiency anemia, endometrial malignancy, infertility or infertility, weight becomes not ideal. Meanwhile, psychologically, changes in menstruation can affect psychic conditions including stress, easy emotions or emotional instability (Aini, Andriani&Hotna, 2020).

Sihombing's research (2019) which examined the Relationship between the Use of 3-month Injection Birth Control and menstrual disorders at the Batam City Balai Permai Health Center. The results showed that there was no relationship between the use of 3-month injection birth control and menstrual disorders at the UPT Puskesmas Balai Permai Batam City with a p-value of 0,000. Another study was conducted by Aisyah (2018) who examined the relationship between the use of injection contraceptives and changes in the menstrual cycle in the acceptor of birth control at the Nurjaimah Clinic, Gebang District, Langkat Regency in 2016. The results of the study showed that there was no relationship between the use of injection birth control and disruption of the menstruation cycle with *p-value* 0.041.

Another study conducted by Aini, Andriani&Hotna (2020) examined the relationship between the use of injection birth control contraceptives and changes in the menstrual cycle in Berandang Village, Lawe Sumur District, Southeast Aceh Regency. The results of the study showed that there is a relationship between the use of injection birth control months and disruption of the menstruation cycle with a p-value of 0.042.

A preliminary survey has been conducted by researchers at the Sukaraja Nuban East Lampung Health Center in May 2021. The results of the preliminary survey found that the number of injection kb participants in 2020 was 3117 participants

consisting of 329 new participants and 2788 old participants, while acceptors in the period January to May 2021 were 643 acceptors. The results of the preliminary survey also found that out of 2788 participants as many as 97 participants experienced menstrual cycle disorders. The results of interviews conducted with 30 participants of injection birth control at the SukarajaNuban Health Center in East Lampung found that 8 mothers had experienced menstrual cycle disorders such as experiencing bleeding spots outside the menstrual cycle, irregular menstruation and erratic menstrual duration.

RESEARCH METHOD

This research method uses an analytical survey design with a cross-sectional approach. The total population was 643, 97 samples were obtained with quota sampling techniques. The instruments used are questionnaires for changes in the menstruation cycle and medical records of the use of family planning. Data analysis using the *Chi-Square* test.

RESEARCH RESULTS

Table 1
Frequency Distribution of Respondents' Characteristics By Age and Education Level

Attribution	Frequency	Percentage
Age		
23-31	50	51.5%
32-40	47	48.5%
Education		

SD	2	2.1%
JUNIOR	21	21.6%
SMA	55	56.7%
THE	19	19.6%

Based on table 1, it was found that most respondents were aged 23-31 (51.5%) years while based on the high school level (56.7%)

Table 2
Distribution of Respondents' Frequency By Type of Injection Birth Control

Injection KB	Frequency	Percentage
3 Months	56	57.7%
1 Month	41	42.3%

The results of the study in table 2 can be concluded that the use of injection birth control for 3 months is more than the 1-month injection kb, namely 56 respondents (57.7%).

Table 3
Attribute of Respondents' Frequency Based on Menstrual Cycle Changes

Menstrual Cycle Changes	Frequency	Percentage
Yes	55	56.7%
Not	42	43.3%

It is known that most respondents experienced changes in menstrual cycle, as many as 55 respondents (56.7%) as stated in table 3

Table 4
The Relationship between the Use of Injection Contraceptives and Menstrual Cycle Changes in the Acceptor of Injection Birth Control in the Working Area of the SukarajaNuban East Lampung Health Center in 2021

Injection KB	Menstrual Cycle Changes				Total	P Value	
	Yes		Not				
	N	%	N	%			
3 Months	55	98.2	1	1.8	56	100	0,000
1 month	0	0,0	41	100	41	100	

Based on table 4, it is known that respondents who used 3 months of injection birth control mostly experienced menstrual cycle changes as much as (98.2%), compared to respondents who used 1 month injection birth control. Meanwhile, respondents who used injection birth control for 1 month all did not experience changes in the

menstrual cycle, namely 41 respondents (100%). However, there are users of injection birth control for 3 months who do not experience a change in the menstrual cycle of 1.8%. The results of statistical tests using *Chi-Square* found that there was a significant relationship between the use of injection contraceptives and menstrual cycle

changes in the acceptors of injection birth control in the Working Area of the SukarajaNuban Health Center in East Lampung in 2021. The results of this study showed that H_a was received with a p -value value = 0.000 < 0.05 and an Odds Ratio value of 0.018 *Confidence Interval* (0.003-0.125).

DISCUSSION

The results of the study showed that the age of respondents was more in the range of 23-31 years, in line with the research of Priyanti and Syalfina (2018). The characteristics of respondents based on the level of education of respondents were mostly obtained at the upper secondary level, in contrast to the results of research by Priyanti and Syalfina (2018) most of the education of respondents in lower secondary education. Women of childbearing age (WUS) in the study ($n=97$) used more injection contraceptives by 3 months than in 1 month. One type of contraceptive that is effectively the choice of mothers until now is hormonal birth control, especially injection contraceptives. This happens because WUS or perceived mothers do not need to be injected every month, are economical, and do not affect milk production according to the information obtained from health workers.

Research data showed that respondents who used injection birth control for 3 months mostly (98.2%) experienced changes in their menstrual cycle and respondents who used injection birth control for 1 month 100% did not experience changes in the menstrual cycle. These results showed that there were differences in the side effects of injection birth control for 3 months and 1 month used by respondents in maintaining pregnancy distance, especially with regard to changes in the menstrual cycle.

The results of this study are in accordance with the theory that states that there are several factors that affect the menstrual cycle, namely hormonal, enzymes, vascular, prostaglandines and the use of birth control (Liani, 2020). In line with Holidah and Citra 's (2019) research which showed that of the 81 respondents of 3-month injection birth control studied, most of them, namely 80.2% of acceptors of 3-month injection birth control had menstrual cycle disorders.

In line with the research conducted by Rilyani, Metri, and Minawati (2018) said that as many as 112 (50.2%) respondents experienced menstrual cycle disorders and as many as 111 (49.8%) respondents did not experience menstrual cycle disorders with a p -value of 0,000 with an OR value of 5,398 meaning that respondents who used injection contraceptives for more than 1 year had a 5.3 times greater risk of

experiencing menstrual disorders. Similarly, the results of the bivariate analysis obtained a significant relationship between the use of injection contraceptives and changes in the menstrual cycle in the acceptor of injection birth control, with a p -value value = 0.000.

Respondents who experienced menstrual cycle disorders (56.7%), based on the results of interviews, menstrual cycle disorders experienced such as blood spots and uneven discharge occurred at the beginning of the use of injection contraceptives, after several years of use this did not happen again. However, the problem that often occurs is that respondents do not come months (menstruation) or amenorrhea, this is in accordance with the opinion of Hartanto (2014); Juliana and Amelia (2020).

Side effects of injection birth control who experience menstrual cycle disorders have symptoms such as droplet bleeding or spotting and bleeding that is longer or more abundant than usual. The cause is a hormonal imbalance so that the endometrium undergoes physiological changes (Irianto, 2012 in Sarmauli, 2019). According to Hartanto (2014), the mechanism of action of injection contraceptives is by preventing ovulation where FSH and LH levels decrease and LH jerks do not occur.

In addition, it also results in the endometrium becoming shallow and atrophic with dormant glands. With prolonged use, the endometrium can become so little, that it is not obtained or only a small amount of tissue is obtained when a biopsy is performed. But those changes will return to normal within 90 days of the last DMPA injection (Hartanto, 2014).

The duration of use of injection contraceptives is also related to changes in the menstrual cycle of injection birth control acceptors according to the results of research by Priyanti and Syalfina (2018) and Juliana and Amelia (2020) who said the length of use of contraceptives will increase the risk of experiencing changes in the menstrual cycle and decreased libido. Compared to injection birth control acceptors who recently used the side effects of contraceptives the most widely felt was headaches as a result of the response of the body to the respondents.

Also proven by the research of Alexander and Melyani, (2019) said that injection contraceptives have the main problem of side effects of using injection birth control experiencing several main problems, namely disruption of menstrual patterns / cycles. Menstrual cycle disorders that occur such as spotting bleeding, irregular bleeding, amenorrhea and changes in the frequency, duration and amount

of blood lost and side effects of injection birth control 3 months are menstrual disorders, weight gain between 1-5 kg.

Menstrual cycle disorders in acceptors of injection birth control for 3 months with the type of disorder based on the results of studies conducted show that those who experience menstrual cycle disorders after the use of injection birth control for 3 months are: *Amenorrhea*, *Spotting*, or *Menoragia* (Ananda, 2012; Prawirohardho, 2014). *Amenorrhea* is caused by the addition of progesterone so that it causes no bleeding due to the use of injection birth control for 3 months, *Spotting* (spots) is caused because the endometrium experiences changes in the menstruation pattern depending on the duration of use, inter menstrual bleeding and bleeding spotting decreases with the passage of time on the use of injection birth control 3 months (Hartanto, 2014).

Menorrhagia (heavy bleeding) is caused due to the body's response and hormonal imbalance in the use of injection birth control for 3 months which stimulates the hormone progesterone to produce more corpus luteum so that it can be a risk of menorrhagia. In menstrual disorders the above factors can occur, and menstruation will return to normal in its usual after 1 to 3 months or even longer a few years after the injection is stopped and this depends on each individual.

Based on observations made by researchers, it was found that using injection contraceptives for 3 months had side effects or the risk of menstrual disorders. This happens because when using an injection contraceptive device containing the hormones estrogen and progesterone can prevent ovulation, while the menstrual cycle is usually normal because there is a reaction between the hypothalamus, pituitary, and ovaries as well as healthy reproductive organs, then there is a hormonal imbalance caused by the use of the contraceptive so that it can provide contraceptive side effects as experienced by most respondents, namely amenorrhea and weight are constantly gaining.

Based on the data obtained by the researchers, the 3-month injection contraceptive method is the most widely used in the SukarajaNuban East Lampung Health Center Working Area and there are acceptors who experience side effects in the form of menstrual disorders and do not experience side effects based on the duration of use of injection birth control for 3 months. In addition, the time of use of the contraceptive method depends on the duration of use of injection birth control for 3 months but there are

some individuals who < 1 year of using injection birth control for 3 months do not experience menstrual disorders because the reaction of each individual is different to the use of injection birth control for 3 months.

Injection contraceptives are a way to prevent pregnancy by going through hormonal injections. Hormonal contraceptives of the type of birth control injection in Indonesia are increasingly used because of their effective work, practical users, relatively cheap and safe prices. Before being injected, the mother's health must be checked first to ensure her compatibility. Injections are given when the mother is not pregnant, generally the use of birth control injections has the same requirements as those of pill users, IUD, Implants, as well as people who cannot use birth control injections, including using hormonal birth control for a maximum of 5 years. The duration of use of injection contraceptives on injection birth control acceptors on average has success above 99%. The advantage of using injection birth control is that it is practical, effective and safe. Does not limit the age and even 3 months of injection birth control drugs do not affect breast milk and are suitable for breastfeeding mothers (Alexander &Melyani, 2019).

CONCLUSION

The majority of respondents were aged 23-31 years and had a high school education. Responden mostly uses injection birth control 3 months and experiences changes in the menstrual cycle. Ada relationship of the use of injection contraceptives with changes in the menstrual cycle in the acceptor of injection birth control with a p-value of 0.000.

SUGGESTION

As an input for health services in providing education to women of childbearing age in deciding on the use of injection birth control, the negative and positive impacts, so that the use of birth control can be carefully planned and know the short and long-term side effects.

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