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Relationship of Contraceptive Use Depo Provera with The Side Effects On Acceptance in Nulle Health Center

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ABSTRACT

Depo Provera Injectable Contraceptive is one of the contraceptive methods that is in demand by acceptance in Nulle Public Health Center. Contraceptive Depo Provera has several side effects such as menstrual cycle disorders, spotting, weight gain and blood pressure. The purpose of this study is to find out the relationship between the use of injectable contraceptive Depo Provera with the occurrence of side effects on the acceptance in Nulle Public Health Center of South Central Timor Regency in 2020. This type of research is quantitative research with cross sectional study design. The sample were 95 respondents. The data analysis used was univariate analysis and bivariate analysis using Chi-square test. The results showed there was a relationship between the use of injectable contraceptive Depo Provera with side effects in the form of menstrual cycle disorders (ρ-value = 0.004), spotting (ρ-value = 0.006) and increased in weight (ρ-value = 0.010) while unrelated side effects are an increased in blood pressure (ρ-value = 0.423). Advice for health workers, especially in the field of maternal and child health and family planning to increase the frequency of counseling to acceptors, especially injectable contraceptive acceptors Depo Provera regarding the side effects of contraceptive used so that acceptors can have a good understanding of the contraceptives used.
Keywords: Contraception; Depo Provera; Side Effects

INTRODUCTION

Hormonal contraceptive method is one of the most in demand contraceptive methods by the public due to its high effectiveness, but on the other hand hormonal contraceptives especially those containing progesterone can change the menstrual cycle such as prolonged cycles (*oligomenorrhea*) and shorter (*polygomenorrhea*) or even not menstruation at all as well as other side effects such as weight gainand blood pressure (Wahyuni, 2017). Side effects caused by hormonal contraceptive methods, especially injectable birth control, have not decreased the interest of the acceptor to continue using, continuing or replacing his contraceptive method with injectable birth control. Data from Indonesia Health Profile in 2018 showed that of the 24,258,532 active birth control participants in Indonesia, 63.71% of birth control acceptances chose to use injectable contraceptives (Kemenkes RI, 2019). The data can be an indicator that injectable birth control is the main choice of birth control participants in preventing pregnancy and regulating fertility. Research conducted injectable KB was widely used in Indonesia because of its effectivity worked, practical used, low price and considered more safer (Setyorini and Lieskusumawati, 2019).

In 2018 East Nusa Tenggara Province had 179,843 active birth control participants with the most widely used contraceptive method coverage was 59.69% injectable contraceptive method and 17.48% implant (Kemenkes RI, 2018). BPS data of NTT Province in 2018, showed that South Central Timor Regency is a regency with the largest number of active birth control participants and users of injectable

contraceptives from 22 districts/cities in NTT Province which is 58,476 active birth control participants and 38,684 injectable contraceptive users (BPS Provinsi NTT, 2019).

South central Timor district health office data showed that Nulle health center is the public health center with the highest number of injectable contraceptive users (1,454 acceptances) followed by Niki-niki health center (1,417 acceptances) and Nunkolo health center (1,399 acceptances) with contraceptive Depo Provera injections. The use of Depo Provera injectable contraceptive in Nulle Public Health West Amanuban Sub-District continues to increase from year to year. In 2016 the number of participants using injectable contraceptives were 1,208 acceptances, in 2017 reached 1,354 acceptances and in 2018 increased again to 1,454 acceptances (Dinas Kesehatan Kabupaten TTS, 2019).

The useful of injectable contraceptive Depo Provera was often found to be some of the deficiencies that become complaints of acceptance namely the onion of menstrual disorders such as shortened or elongated menstrual cycles, increased weight, increased blood pressure and late fertility return after discontinuation. Data from Nulle Health Center in 2018 showed that there are several side effects that become complaints from injectable birth control acceptance Depo Provera namely menstrual disorders 82 cases, weight gain 75 cases, spotting 64 cases, hypertension 43 cases, whitish 11 cases, headache 8 cases and sexual dysfunction 5 cases. Side effects of injectable birth control Depo Provera have a serious impact on the health of acceptors in long-term use which can increase the risk of cardiovascular disease, decreased bone density, increase the risk of breast cancer and cervical cancer (Wahyuni, 2017).

Awaliyah, Pradjatmo and Kusnanto Research (2017) stated that the use of Depo Provera ≥5 years relative risk (RR) increased breast cancer by 2,6 compared to those who never used (Awaliyah, Pradjatmo and Kusnanto, 2017). The increased risk of breast cancer is associated with progestins from synthetic results of the hormone progesterone, which plays an important role in the development and physiology of the mammary gland. This was supported by Nadhila and Cindy's research (2017) which found that of the 38 respondents with breast cancer at the age of under 35 at RSUP H. Adam Malik Medan, 22 people (57.9%) among them had a history of using hormonal contraceptives type injections 3 months with 15 people (39.4%) among them has a usage history of >5 years (Nadhila and Cindy, 2017). Based on the above problem exposure, researchers are interested in conducting research related to "Relationship of Use of Injectable Contraceptive Depo Provera with The Incidence of Side Effects on Akseptor in Puskesmas Nulle of South Central Timor Regency in 2020".

The general purpose of this study is to find out the relationship between the use of injectable contraceptive Depo Provera with the occurrence of side effects on the acceptance in Nulle Health Center of South Central Timor Regency in 2020. The specific purpose of this study is to know the relationship between the use of injectable contraceptive Depo Provera with menstrual cycle disorders, spotting, weight gain and increased blood pressure in the acceptance in Nulle Health Center.

METHOD

The type of research used in this study was quantitative research using a *cross sectional study approach.* This research was conducted in the working area of Nulle Health Center consisting of 8 villages namely Tubuhue Village, Haumenibaki Village, Mnelalete Village, Pusu Village, Nulle Village, Tublopo Village, Nusa Village and Nifukani Village in June-July 2020. The population in this study were all hormonal birth control (injectable birth control, pills and implants) in January-December 2019 as many as 2,036 acceptances. The size of the sample obtained using the Slovin formula were 95 respondents. Data collecting by using random sampling cluster technique, with FP acceptance criteria has used contraception ≥1 year, has a record of weight and blood pressure before and at the last timeusing contraception on the birth control card. The instrument in this study was using questionnaire. This questionnaire contains the variables to be examined. The dependent variables in this study were menstrual cycle disorders, *spotting*, weight gain and increased blood pressure, while independent variables were the use of injectable contraceptive Depo Provera on the acceptance at Nulle health center in 2020. The data collected in this study by interviewed using questionnaires, FP cards and FP register books in Nulle Health Center. The data analysis techniques in this study use univariate analysis and bivariate analysis. The bivariate analysis aims to look at the relationship between independent variables and dependent variables by using the *Chi-square test*.

RESULTS AND DISCUSSION

Characteristics of Respondents

In general, the characteristics of respondents include age, marital status, education level, number of children, occupation, history of obesity, history of hypertension, length of use of birth control and type of Family Planning (FP) use.

a) Distribution of Respondents Based on Age

Table 1. Distribution of Respondents Based on Age in Nulle Health Center 2020

No	Age	n	%
1.	≤ 20 Years	2	2.1
2.	21-30 Years	37	38.9
3.	31-40 Years	39	41.1
4.	> 40 Years	17	17.9
	Amount	**95**	**100.0**

Table 1 showed that of the 95 respondents most respondents were in the age group of 31-40 years as many as 39 respondents (41.1%), while the least were in the age group ≤20 years as many as 2 respondents (2.1%).

b) Distribution of Respondents Based on Marital Status

Table 2. Distribution of Respondents Based on Marital Status in Nulle Health Centers 2020

No	Marital Status	n	%
1.	Married	89	93.7
2.	No/Unmarried	6	6.3
3.	Divorced	0	0.0
	Amount	**95**	**100.0**

Table 2 showed that the majority of respondents were in married status as much as 89 respondents (93.7%), while with unmarried marriage status as many as 6 respondents (6.3%) and no respondents with marital status divorced.

c) Distribution of Respondents Based on Level of Education

Table 3. Distribution of Respondents Based on Level of Education in Nulle Health Center 2020

No	Education Level	n	%
1.	SD	22	23.2
2.	SMP	13	13.7
3.	SMA	45	47.4
4.	PT	15	15.8
	Amount	**95**	**100.0**

Table 3 showed that the level of education, the most respondents are at the senior high school education level of 45 respondents (47.4%), while the least available at the junior high school education level are 13 respondents (13.7%).

d) Distribution of Respondents Based on Number of Children

Table 4. Distribution of Respondents Based on Number of Children in Nulle Health Center 2020

No	Number of Children	n	%
1.	1-2 People	43	45.3
2.	3-4 People	37	38.9
3.	5-6 People	12	12.6
4.	7-8 People	3	3.2
	Amount	**95**	**100.0**

Table 4 showed that the number of children, the most respondents are in the number of children 1-2 people which is 43 respondents (45.3%), while the least number of children is 7-8 people which is 3 respondents (3,2%).

e) Distribution of Respondents Based on Employment

Table 5. Distribution of Respondents Based on Employment in Nulle Health Center 2020

No	Employment	n	%
1.	Not Working	50	52.6
2.	Civil Servants	14	14.7
3.	Wiraswasta	7	7.4
4.	Farmers	24	25.3
	Amount	**95**	**100.0**

Table 5 showed that, the majority of respondents did not work as many as 50 respondents (52.6%), while the least type of work was as wiraswasta as many as 7 respondents (7.4%).

f) Distribution of Respondents Based on the History of Obesity

Table 6. Distribution of Respondents Based on the History of Obesity in Nulle Health Center 2020

No	History of Obesity	n	%
1.	Yes	16	16.8
2.	Not	79	83.2
Amount		**95**	**100.0**

Table 6 showed that the history of obesity, most respondents did not have a history of obesity as many as 79 respondents (83.2%), while 16 respondents (16.8%) others have a history of obesity.

g) Distribution of Respondents Based on the History of Hypertension

Table 7. Distribution of Respondents Based on the History of Hypertension in Nulle Health Center 2020

No	History of Hypertension	n	%
1.	Yes	9	9.5
2.	Not	86	90.5
Amount		**95**	**100.0**

Table 7 showed that the history of hypertension, most respondents did not have a history of hypertension as many as 86 respondents (90.5%), while 9 respondents (9.5%) others have a history of hypertension.

h) Distribution of Respondents Based on Length of FP Usage

Table 8. Distribution of Respondents Based on Length of FP Usage in Nulle Health Center 2020

No	Length of FP Usage	n	%
1.	2-3 Years	57	60,0
2.	4-5 Years	23	24,2
3.	6-7 Years	8	8,4
4.	>7 Years	7	7,4
Amount		**95**	**100,0**

Table 8 showed that the length of use of FP, respondents are at most available in the length of FP usage 2-3 years which is as much as 57 respondents (60.0%), while the least are in the length of use of FP >7 years as many as 7 respondents (7.4%).

1. Relationship of Depo Provera Injectable Contraceptive Use with Menstrual Cycle Disorders

The relationship between the use of Depo Provera injectable contraceptives and menstrual cycle disorders in acceptors in Nulle Public Health Center working area in 2020 can be seen in table 9.

Table 9. Relationship of Depo Provera Injectable Contraceptive Use with Mentrual Cycle Disorders in Nulle Health Center 2020

Depo Provera Injectable Contraceptives	Menstrual Cycle Disorders				Amount		*ρ-value* (∝≤0.05)
	Yes		Not				
	n	%	n	%	n	%	
Use	54	85.7	9	14.3	63	100.0	
Not Using	19	59.4	13	40.6	32	100.0	***0.004***
Amount	**73**	**76.8**	**22**	**23.2**	**95**	**100.0**	

The results showed that respondents who experienced the most menstrual cycle disorders were found in respondents with the category of using injectable contraceptive Depo Provera which is 85.7%, compared to those who did not use injectable contraceptive Depo Provera which was 59.4%. *Chi-square test* results showed a value of *ρ-value* = 0.004 where the value ρ<0.05 which means there was a relationship between the use of injectable contraceptive Depo Provera with menstrual cycle disorders.

Chi-square test results showed there was a link between the use of injectable contraceptive Depo Provera and menstrual cycle disorders in the acceptance in the working area of Nulle Health Center in 2020. The results of this study are in line with research conducted by Mulyandari (2019) which found that there is a significant link between the use of injectable contraceptives 3 months with menstrual cycle disorders in injectable birth control acceptance in BPM Fitriani in 2019 (*ρ-value* = 0.000) (Mulyandari, 2019). Menstrual cycle disorders experienced by 95 respondents to contraceptive users in the working area of Nulle Public Health Center showed that, 40 respondents (42.1%) among them experienced amenorrhea, and 28 respondents (70.0%) among them were users of injectable contraceptive Depo Provera. This study were in line with Holidah and Paramudita research (2019) which found that of the 81 3-month injectable FP respondents studied, a total of 65 respondents (80.2%) menstrual cycle disorders and 48 respondents (59.2%) among them experienced amenorrhea (Holidah and Paramudita, 2019).

Research conducted by Trisnawati and Handayani (2015) found that there is a meaningful link between the contraceptive use of Depo Provera or often called injectable birth control 3 months with the incidence of amenorrhea (Trisnawati and Handayani, 2015). Hartanto's theory (2013) stated that injectable birth control as a hormonal contraceptive can stimulate the ovaries to make estrogen and progesterone hormones that can prevent ovulation so that it can affect normal menstrual patterns into amenorrhea, bleeding patches, changes in frequency and bloodcount (Hartanto, 2013). The on-site disruption of the menstrual cycle in the acceptance is not only caused by an imbalance of hormones in the body due to contraceptive use, but also caused by several other factors such as stress, lack of nutritious food intake, and fatigue. Factors that influence the menstrual cycle disorders were lack of intake of nutritious foods and physical activity are factors that affect the regularity of the menstrual cycle that occurs in women because it affects the nervous system in the hypothalamus and impaired hormonal work function (decreased LH levels) thus causing the disruption of the menstrual cycle (Kusmiran, 2014). Sukmawati, Melkawati an Purwanti research (2017) which found there was a

significant relationship between nutritional status and menstrual cycle disorders with *ρ-value* = 0.003 and there is a relationship between stress and *menstrual* cycle disorders with *ρ-value* = 0.004 (Sukmawati, Melkawati and Purwanti, 2017).

Other causes that can affect respondents menstrual cycle disorders are as many as 31 respondents (42.5%) working as self-employed (7 people) and farmers (24 people) said they were stressed by the situation due to the covid-19 pandemic which caused family incomes to decrease but spending on daily needs continued to increase, due to the declining purchasing power of people for services and products sold by respondents. 42 respondents (57.5%) others said that in recent months feeling exhausted by increased home activities such as house cleaning, more laundry (cutlery and clothing) and time to take care of children after government advice at home alone due to a health situation that is not conducive to normal society. The researchers also found that the type of food eaten by respondents was mostly only in the form of carbohydrates namely corn and yams cooked and then eaten with chili, so the researchers argued that the lack of intake of nutritious foods was also one of the factors respondents experienced in the disruption of the menstrual cycle where fat is one of the ingredients of the form of steroid hormones that play a role in the onion of menstruation.

The results showed that 78.1% of the 73 respondents who had menstrual cycle disorders were not bothered by the menstrual cycle disorder. This research also found that from 78.1% of respondents who were not bothered by the disruption of the menstrual cycle can be caused by the low level of education that respondents have, namely as many as 38.6% of respondents with elementary school education level and 22.8% of respondents with a level of junior high school education that affects the respondent's level of knowledge and understanding of the side effects of contraception. In addition, researchers also found that of the 47.4% of respondents who said they had been briefed by midwives or relatives who also used injectable contraceptive Depo Provera did not get a detailed explanation of the mechanism of the onset of side effects due to contraceptive use as well as other factors beyond the use of contraceptives that can also influence the onset of such side effects.

The results of the interview conducted, researchers assumed that there was a link between the length of contraceptive use and the on-the-rise of menstrual cycle disorders in the working area of Nulle Health Center because, as many as 47 respondents (64.1%) said starting to experience menstrual disorders after ≥1 year of contraceptive use, 16 respondents said they experienced menstrual cycle disorders after 6 months of contraceptive use and 10 other respondents said they experienced menstrual cycle disorders after <6 months of contraceptive use (5 respondents after 1 month of use, 4 respondents after 3 months of use and 2 respondents after 4-5 months of use). A total of 31 (65.9%) of the 47 respondents who experienced menstrual cycle disorders after ≥1 year were users of the injectable contraceptive Depo Provera. The results of this study are in line with research conducted by Holidah and Paramudita (2019) which said that injectable birth control acceptance 3 months with a length of use

>12 months, 6 times more risk for menstrual cycle disorders compared to the acceptance using injectable kb 3 months ≤12 months (OR= 6,382) (Holidah and Paramudita, 2019).

2. Relationship of Depo Provera Injectable Contraceptive Use with Spotting

The relationship between the use of Depo Provera injectable contraceptives and spotting on acceptors in the working area of Nulle Health Center in 2020 can be seen in table 10.

Table 10. Relationship of Depo Provera Injectable Contraceptive Use with Spotting in Nulle Public Health Center 2020

Depo Provera Injectable Contraceptives	*Spotting*				Amount		*ρ-value* (∝≤0.05)
	Yes		Not				
	n	%	n	%	n	%	
Use	49	77.8	14	22.3	63	100.0	
Not Using	16	50.0	16	50.0	32	100.0	***0.006***
Amount	**65**	**68.4**	**30**	**31.6**	**95**	**100.0**	

The results showed that respondents who experienced the most spotting were found in respondents with the category of using injectable contraceptive Depo Provera which is 77.8%, compared to those who did not use injectable contraceptive Depo Provera which is 50.0%. *Chi-square test results* showed a value of *ρ-value* = 0.006 where the value of *ρ*<0.05 which means there is a relationship between the use of injectable contraceptive Depo Provera with *spotting events*.

The results showed that respondents in this study experienced *more spotting* (68.4%) compared to those who did not experience spotting (31.6%). *Chi-square statistical test results showed* there was a link between the use of Depo Provera injectable contraceptives and spotting events in the acceptance in the working area of Nulle Health Center. The results of this study are in line with Setyorini and Lieskusumastuti research (2020) stated that there was a link between the length of use of injectable contraceptive and spotting in PMB Darmiati Ngemplak Boyolali (Setyorini and Lieskusumastuti, 2020).

Spotting in women users of injectable birth control 3 months (Depo Provera) occurs due to the addition of the hormone progesterone which caused dilation of venous blood vessels in the endometrial (Nazirun, 2019). This was in line with Septiana research (2019) which stated that the dilation of small veins in the endometrial causes the veins to become brittle so that there was local bleeding in the endometrial that causes spotting (Septiana, 2019). A total of 14 (21.5%) of the 65 respondents who experienced spotting were disturbed by the disorder and 51 (78.5%) respondents were not bothered by spotting.

The results of the study in the field found that 14 respondents who were disturbed by spotting events could be affected by the low participation of respondents to seek information related to spotting disorders experienced by preferting to ignore the disorder. In addition, based on the results of interviews conducted, researchers also found that acceptors tend to have low knowledge of the side effects that can result from contraceptive use. This can be due to the low level of education that respondents had, namely

elementary school (9 respondents) and junior high school (5 respondents) as well as the low frequency of counseling conducted by health workers to acceptors regarding side effects and other information about the use of contraceptives. This is evidenced by the results of interviews from respondents and schedules in Nulle Public Health Center that showed that the frequency of counseling by health officials is only done once a month even two months new counseling on contraception without using promotional media such as posters or leaflets to support the delivery of information and help acceptors to more easily receive the information provided, so that the acceptor tends to no longer remember or forget the information received from health workers.

Spotting is bleeding that occurs outside the menstrual cycle but only in the form of blood spots and will decrease with the longer the use of birth control equipment (Irianto, 2014). This is in line with the results of the study which found that the disorder in the form of *spotting* in respondents decreased along with the increasing length of contraceptive use, namely in respondents with a long life of 2-3 years who experienced spotting as many as 38 respondents, then decreased in respondents with a length of use of 4-5 years as much as 16 respondents and decreased again in respondents with a length of use of 6-7 years and >7 years which is as much as 6 respondents and 5 respondents respectively.

3. Relationship of Depo Provera Injectable Contraceptive Use with Weight Gain

The relationship between the use of Depo Provera injectable contraceptives and weight Gain on acceptors in the working area of Nulle Health Center in 2020 can be seen in table 11.

Table 11. Relationship of Depo Provera Injectable Contraceptive Use with Weight Gain in Nulle Public Health Center 2020

Depo Provera Injectable Contraceptives	Weight Gain				Amount		*ρ-value* (∝≤0.05)
	Yes		Not				
	n	%	n	%	n	%	
Use	48	76.2	15	23.8	63	100.0	***0.010***
Not Using	16	50.0	16	50.0	32	100.0	
Amount	**64**	**67.4**	**31**	**32.6**	**95**	**100.0**	

The results showed that respondents in this study experienced more weight gain (67.4%) compared to those who did not experience weight gain (32.6%), and as many as 16 (16.8%) of the 95 repondens who have a history of obesity. *Chi-square* statistical test results showed there is a link between the use of injectable contraceptive Depo Provera and weight gain in the acceptance in the working area of Nulle Health Center in 2020. The results of this study are in line with Kunang, Septiasari and Meinanda research (2020) which stated that there is a relationship between the use of injectable 3 months Of Depo Medroxy Progesterone Acetate (DMPA) and weight gain in BPM Selva Tiara Bulok sub-district in 2019 with a value of *ρ-value* = 0.011 ($\rho < 0.05$) to 42 respondents using injectable contraceptives 3 months (Kunang, Septiasari and Meinanda, 2020).

This is in line with Handayani and Perwiraningtyas research (2019) which stated that the use of injectable contraceptives 3 months is able to increase weight because the content of the hormone

progesterone in DMPA has an effect on the hypothalamus which inhibits the appearance of increased appetite (Handayani and Perwiraningtyas, 2019). Weight gain in birth control acceptance of Depo Provera occurs because the hormone progesterone facilitates the change of carbohydrates and sugars into fat so that the fat under the skin increases, in addition to the hormone progesterone also causes increased appetite (Irianto, 2014). This is in line with the results of the study which found that of the 95 respondents most contraceptive users felt an increase in appetite as much as 57.9% after contraceptive use.

The results found that the average respondent experienced an increase in weight after contraceptive use of <1 Kg as much as 2 respondents, 1-3 Kg as many as 37 respondents, 4-6 Kg as many as 16 respondents and >6 Kg as many as 9 respondents. Weight gain experienced by respondents after contraceptive use occurred most times at an average use period of 2-3 years by 53.1%, 4-5 years usage period of 37.5%, length of use 6-7 years and >7 years respectively as much as 4.7%. The average weight of respondents prior to contraceptive use was 49.6 Kg while the average body weight after contraceptive use was 51.5 Kg. The results of this study are in line with Kunang, Septiasari and Meinanda research (2020) which found that there is a relationship between the use of injectable FP DMPA and weight gain (*ρ-value* = 0.011) with the average length of use is most common in >4 years as much as 88.2% with initial BB before the use of Depo Provera injectable FP by 54.40 Kg and after the use of injectable KB Depo Provera increased to 58.10 Kg (Kunang, Septiasari and Meinanda, 2020).

Another cause of weight gain can be due to low physical activity related to shifting busyness of respondents related to the employment status of the respondent, so impacting the onsluction of fat on the body of the acceptor. The results of the study in the field found that most respondents have low physical activity or tend to decrease, where usually respondents start waking up at 05.00 WITA to work in the rice fields or start sewing or taking care of the child to go to school changed after the Covid-19 pandemic to wake up longer (09.00 WITA) just to cook and eat or just clean the house and after the activity is finished then the respondent chooses to sleep again or just sit down to talk to neighbors without any other physical activity.

4. Relationship of Depo Provera Injectable Contraceptive Use with Increased Blood Pressure

The relationship between the use of Depo Provera injectable contraceptives and the increase in blood pressure in acceptors in the working area of Nulle Health Center in 2020 can be seen in table 12.

Table 12. Relationship of Depo Provera Injectable Contraceptive Use with Increased Blood Pressure in Nulle Health Center 2020

Depo Provera Injectable Contraceptives	**Increased Blood Pressure**				**Amount**		***ρ-value*** **(∝≤0.05)**
	Ride		**No Ride**				
	N	**%**	**N**	**%**	**N**	**%**	
Use	35	55.6	28	44.4	63	100.0	***0.423***
Not Using	15	46.9	17	53.1	32	100.0	
Amount	**50**	**52.6**	**45**	**47.4**	**95**	**100.0**	

The results showed that respondents who experienced an increase in blood pressure in the category of using Depo Provera injectable contraceptives as many as 35 respondents (55.6%), compared to those who did not use depo provera injectable contraceptives by 46.9%. *Chi-square* test results showed *ρ-value* value = 0.423 where the value *ρ*>0.05 which means there is no relationship between the use of injectable contraceptive Depo Provera with an increase in blood pressure.

The results showed that respondents in this study experienced the most increases in blood pressure (52.6%) compared to those who did not experience an increase in blood pressure (47.4%), and as many as 9.5% of respondents had a history of hypertension. *Chi-square* statistical test results showed no relationship between the use of Depo Provera injectable contraceptives and increased blood pressure in the acceptance in the working area of Nulle Health Center in 2020. The results of this study in line with research conducted by Maharani (2018) conducted to 71 respondents at Pekalongan Health Center found that there is no significant link between the use of injectable contraceptive Depo Provera with an increase in blood pressure (*ρ-value* = 0.105>0.05) (Maharani, 2018). This is because the cause of increased blood pressure can be influenced by many factors such as salt and caffeine consumption levels, hypertension history, age and weight factors.

Another thing that can lead to the absence of a link between the use of injectable contraceptive Depo Provera and the increase in blood pressure is the age factor of respondents who tend to be more at the age of 21-30 years as much as 38.9% and the age of 31-40 years as much as 41.1% which is the category of women of childbearing age where the hormone estrogen which also serves as a protector in the cardiovascular system in women is still high so as to lower the risk of hypertension or increased blood pressure. In addition,the researchers also found that there was a relationship between the length of contraceptive use and the increase in blood pressure in which respondents who used the most contraceptives at a 2-3 years period of use by 60.0% indicating that respondents were still on contraceptive use not too long ago so could not see significant changes in the respondent's blood pressure. This is in accordance with Prawerti, Runiari and Ruspawan research (2019) which states that the risk of blood pressure changes in the use of injectable birth control Depo Provera will increase with the age and length of contraceptive use (Prawerti, Runiari and Ruspawan, 2019).

The results found that as many as 18 (36.0%) of the 50 respondents who experienced an increase in blood pressure were disturbed by the. Based on the results of the interview using questionnaires, the reason respondents were not disturbed by the increase in blood pressure was 90.6% of respondents said the increase in blood pressure experienced after contraceptive use was not interfering with the daily activity of the respondent and 9.4% of respondents said they had a history of hypertension so, respondents did not feel disturbed by the increase in blood pressure experienced after contraceptive use.

CONCLUSION

There was a relationship between the use of injectable contraceptive Depo Provera with the incidence of side effects in the acceptance in Nulle Health Center of South Central Timor Regency in 2020. Advice for health workers, especially in the field of maternal and child health and family planning to increase the frequency of counseling to acceptors, especially injectable contraceptive acceptors Depo Provera regarding the side effects of contraceptive use so that acceptors can have a good understanding of the contraceptives used.

CONFLICT OF INTEREST

No potential conflict of interest was included in this research.

THANK-YOU NOTE

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