

Original Article

Analyzing The Use Of Kb Pill Contraception Equipment With Hypertension In Fertilizer Age Women

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ABSTRACT

Background: Hypertension in couples of childbearing age can be caused by the use of hormonal birth control which continues to be used by women of childbearing age, it can cause fatal complications, such as heart attacks, strokes and kidney failure. Hypertension can also cause blindness, irregular heart rhythms and heart failure. The aim of analyzing the effect of contraceptive use is the birth control pill with the incidence of hypertension in women of childbearing age in the village of Paleleh, Paleleh District, Buol District.

The design used in the study was a cross sectional survey. Population is all women of childbearing age who have become KB pill acceptors. The sample size was 40 respondents using Accidental sampling technique. The independent variable of the study was the use of pill contraception. The dependent variable is the incidence of hypertension. Data was collected using a questionnaire, then data were analyzed using the Spearman Rho test, with a significance level of $\alpha \leq 0.05$.

The results of the study showed that at most respondents had a duration of using the Pill for 24 months as many as 10 respondents (52.6%), the incidence of stage 2 hypertension was 15 respondents (37.5%), the results showed that the statistical test obtained $p = 0,000$ with $\alpha = 0.05$, which means that H_0 is rejected and H_1 is accepted so that it can be interpreted that there is a significant relationship on the variable length of birth control pills with the incidence of hypertension, with a correlation coefficient of 0.851 which means having a strong relationship.

Birth control pills can affect blood pressure which can cause hypertension in women of childbearing age.

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Introduction

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A quality family is prosperous, healthy, advanced, independent, has the ideal number of children, forward-looking, responsible, harmonious and devoted to God Almighty, and the mission of national family planning in the new paradigm is to emphasize the importance of respecting reproductive rights as an integral part of improving family quality which greatly influences the realization of a quality population (BKKBN, 2011). Hypertension is a condition when blood pressure in blood vessels increases chronically (Suraoka, 2012). Untreated hypertension can cause fatal complications, such as heart attacks, strokes and kidney failure. Hypertension can also cause blindness, irregular heart rhythms and heart failure.

The 2012 World Health Statistics report states that one in three adults worldwide, suffering from high blood pressure, is a condition that accounts for about half of all deaths from strokes and heart disease. In the world the highest prevalence of hypertension is in some low-income countries in Africa. It is estimated that more than 40% of adults in the country have hypertension. The prevalence of hypertension in Indonesia is 31.7% or 1 in 3 adults have hypertension, 76.1% are not aware of the already hypertension (RI Ministry of Health, 2013).

Hypertension is one of the most non-communicable diseases found in society today. The prevalence and predictions of the *World Health Organization* (WHO) noted that in 2012 at least 839 million cases of hypertension were estimated to be 1.15 billion in 2025 or around 29% of the total population the world, where sufferers are more in women (30%) than men (29%) (Triyanto, 2014). WHO data (2017) states that 7.5 million deaths are caused by hypertension or around 12.3 of total deaths in the world (WHO, 2017). Riskesdas (2013) data on hypertensive patients in Indonesia amounted to 25.8% (RI, 2013). Data from the City Health Office of Kediri (2015) showed the number of hypertensive patients was 23,857 people (Suprpto, 2016).

In America, an estimated 30% of the population (\pm 50 million people) suffer from high blood pressure ((140/90 mmHg) with a

percentage of health costs quite large each year. *The World Health Organization* (WHO) noted that in 2012 at least 839 million cases of hypertension, estimated to be 1.15 billion in 2025 or around 29% of the total world population, where the sufferers were more in women (30%) than men (29%) . About 80% increase in hypertension cases occurs especially in developing countries (Triyanto, 2014). In Central Sulawesi specifically Hypertension has increased from 2015 to 2017, where in 2015 there were 16,718 cases, in 2016 there were 24,965 and in 2017 it increased to 33,093 (Central Sulawesi health office, 2017). The Buol District Health Office noted that in 2017 there were 1,160 hypertension cases divided into seven working areas of the Puskesmas in Buol District (Buol Health Service, 2017),

According to the *World Health Organization* (WHO) (2014) contraceptive use has increased in many parts of the world, especially in Asia and Latin America and lowest in Sub-Saharan Africa. Globally, modern contraceptive users have increased not significantly from 54% in 1990 to 57.4% in 2014. Regionally, the proportion of couples of reproductive age 15-49 years reporting the use of modern contraceptive methods has increased at least the last 6 years. In Africa, from 23.6% to 27.6%, in Asia it has increased from 60.9% to 61.6%, while Latin America and the Caribbean rose slightly from 66.7% to 67.0%.

An estimated 225 million women in developing countries want to delay or stop fertility but do not use any contraceptive method for the following reasons: limited choice of contraceptive methods and experience of side effects. Unmet needs for contraception are still too high. Injustice driven by population growth (WHO, 2014). The prevalence of hypertension sufferers in Nursing News Volume 2, Number 3, 2017 Hypertension in Women of Fertile Couples with Long Use of Indonesian Pill 825 Indonesia continues to increase. The results of the Household Health Survey (SKRT) in 2000 were 21% to 26.4% and 27.5% in 2001 and 2004. Furthermore, it is estimated to increase again

to 37% in 2015 and to 42% in 2025. Data from Paleleh Health Center in January 2018, there were 3,550 women of reproductive age in the Puskesmas Paleleh area, women of childbearing age who actively used contraceptives amounting to 1,727 people and 229 of them were using birth control pills, while 623 women in fertile couples women of reproductive age couples who actively use contraception amounted to 127 people and 40 of them were using birth control pills. From the description above,

Hypertension in Fertile Couples Couple Women with Long Use of 826 Birth Control Pills found in the lungs, angiotensin I was changed to angiotensin II. Angiotensin II is what has an important role in raising blood pressure through two main actions. This first action is to increase the secretion of antidiuretic hormone (ADH) and thirst. ADH is produced in the hypothalamus (pituitary gland) and works in the kidneys to regulate osmolality and urine volume. With increasing ADH, very little urine is excreted from the body (antidiuresis), so it becomes concentrated and high in osmolality. To dilute it, the volume of extracellular fluid will be increased by drawing fluid from the intracellular part, and consequently, the blood volume increases, which will eventually increase blood pressure. The second action is to stimulate aldosterone secretion from the adrenal cortex.

Aldosterone is a steroid hormone that has an important role in our kidneys. To regulate extracellular fluid volume, aldosterone will reduce excretion of NaCl (salt) by reabsorbing it from the kidney tubules. Increasing NaCl concentration will be diluted again by increasing the volume of extracellular fluid which in turn will increase the volume and blood pressure. Hypertension can have an impact on the sufferer, including: Headache, aches, uncomfortable feeling in the neck, feeling of spinning to fall, pounding, rapid heartbeat, ringing in the ears, Heart failure, Rupture of capillary arteries in the brain and Rupture of retinal blood vessels causes blurred vision and even blindness.

Based on the background, the researchers were interested in conducting a study on the use of contraceptive

contraceptives with the incidence of hypertension in women of childbearing age in the village of Paleleh, Paleleh Health Center, Paleleh District, Buol District.

Method

design used in the study was a *cross sectional survey*. Population is all women of childbearing age who have become KB pill acceptors. The sample size is 40 respondents using *Accidental sampling technique*. The independent variable of the study was the use of pill contraception. The dependent variable is the incidence of hypertension. Data was collected using a questionnaire, then the data were analyzed using the test *Spearman Rho*, with a significance level of $\alpha \leq 0.05$.

Results

Table 1. Distribution of Frequency of Characteristics of Respondents by Age in women of childbearing age at Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on July 17-August 17 2018 (n = 40)

No	Age	Frequency	Percentage
1	26-35 years	4	10.0
2	36-45 years	17	42.5
3	46-55 years	19	47.5
	Total	40	100

The results of the study showed that most of the respondents aged 46-55 years were 19 respondents (47.5%).

Table 2. Distribution of Frequency Characteristics Respondents were based on education for women of childbearing age at Paleleh Health Center, Paleleh District, Buol District Central Sulawesi Province on July 17-August 17 2018 (n = 40)

No	Education	Frequency	Percentage
1	SD	7	17,5
2	School Middle	10	25.0
3	SMA	23	57.5
	Total	40	100

The results of the study showed that at most of the respondents had high school education as many as 23 respondents (57.5%).

Table 3. Distribution of Frequency of Characteristics of Respondents based on Employment in women of childbearing age in Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

No	Occupation	Frequency	Percentage
1	Employee	5	12.5
2	Private	5	12.5
3	Not working	30	75.0
	Total	40	100

The results of the study showed that more than half of the respondents did not work as many as 30 respondents (75%).

Table 4. Frequency of Respondents Distribution based on Length of Use of Pill Pil in women of childbearing age at Paleleh Health Center, Paleleh District, Buol Regency Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

No	OldUse of Pill Pil (Month)	Frequency	Percentage
1	<12 months	4	10.0
2	12-24 months	18	45.0
3	25-36 months	11	27.5
4	37-48 months	6	15.0
5	49-60 months	1	2.5
	Total	40	100

Research results obtained that at most respondents had a duration of 12-24 months the use of birth control pills was 18 respondents (45%).

Table 5. Frequency Distribution of Respondents based on Hypertension Events in women of childbearing age at Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on July 17-August 17 2018 (n = 40)

No	Hypertension Event	Frequency	Percentage
1	Stage 1 (Mild Hypertension)	11	27.5
2	Stage 2 (Moderate hypertension)	15	37.5
3	Stage 3 (Severe hypertension)	14	35.0
	Total	40	100

The results of the study showed that more than half of the respondents had the incidence of stage 2 hypertension of 15 respondents (37.5%),

Table 6. Cross Tabulation between Occurrence of hypertension and employment in women of childbearing age at Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

			Pekerjaan			Total
			Karyaw an	Swas ta	Tidak beker ja	
Kejadian Hiperte nsi	Stadium 1 (Hiperte nsi ringan)	Count	2	1	8	11
		% of Total	5,0%	2,5%	20,0 %	27,5 %
	Stadium 2 (Hiperte nsi sedang)	Count	3	3	9	15
		% of Total	7,5%	7,5%	22,5 %	37,5 %
	Stadium 3 (Hiperte nsi berat)	Count	0	1	13	14
		% of Total	,0%	2,5%	32,5 %	35,0 %
Total		Count	5	5	30	40
		% of Total	12,5%	12,5 %	75,0 %	100,0 %

Results of the study it was found that most respondents had the incidence of stage 3 hypertension by not working as many as 13 respondents (32.5%).

Table 7. Cross tabulation between duration of use of birth control pills with age in women of childbearing age in Paleleh Health Center Paleleh District, Buol District Central Sulawesi Province on July 17-August 17 2018 (n = 40)

			Umur			Total
			26-35 tahun	36-45 tahun	46-55 tahun	
Lama Penggunaan KB Pil	<12 bulan	Count	2	2	0	4
		% of Total	5,0%	5,0%	,0%	10,0%
	12-24 bulan	Count	1	13	4	18
		% of Total	2,5%	32,5%	10,0%	45,0%
	25-36	Count	1	2	8	11



bulan						
	% of Total	2,5%	5,0%	20,0%	27,5%	
37-48 bulan	Count	0	0	6	6	
	% of Total	,0%	,0%	15,0%	15,0%	
49-60 bulan	Count	0	0	1	1	
	% of Total	,0%	,0%	2,5%	2,5%	
Total	Count	4	17	19	40	
	% of Total	10,0%	42,5%	47,5%	100,0%	

The results of the study showed that most respondents had long-term use of KB pills for 12-24 months with ages 36-45 years as many as 13 respondents (32.5%).

Table 8. Cross Tabulation between the duration of KB Pil use and education in women of childbearing age at Paleleh Health Center, Paleleh District, Buol District Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

			Pendidikan			Total
			SD	SMP	SMA	
Lama Penggunaan KB Pil	<12 bulan	Count	0	1	3	4
		% of Total	,0%	2,5%	7,5%	10,0%
	12-24 bulan	Count	4	5	9	18
		% of Total	10,0%	12,5%	22,5%	45,0%
	25-36 bulan	Count	0	3	8	11
		% of Total	,0%	7,5%	20,0%	27,5%
	37-48 bulan	Count	3	1	2	6
		% of Total	7,5%	2,5%	5,0%	15,0%
	49-60 bulan	Count	0	0	1	1
		% of Total	,0%	,0%	2,5%	2,5%
Total		Count	7	10	23	40
		% of Total	17,5%	25,0%	57,5%	100,0%

The results of the study showed that most respondents had long-term use of KB pills for 12-24 months with high school education as many as 9 respondents (22.5%).

Table 9. Cross tabulation between the duration of use of birth control pills and work for women of childbearing age in Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

			Pekerjaan			Total
			Karyaw	Swast	Tidak bekerj	
			an	a	a	
Lama Penggunaan KB Pil	<12 bulan	Count	0	0	4	4
		% of Total	,0%	,0%	10,0%	10,0%
	12-24 bulan	Count	5	3	10	18
		% of Total	12,5%	7,5%	25,0%	45,0%
	25-36 bulan	Count	0	1	10	11
		% of Total	,0%	2,5%	25,0%	27,5%
	37-48 bulan	Count	0	1	5	6
		% of Total	,0%	2,5%	12,5%	15,0%
	49-60 bulan	Count	0	0	1	1
		% of Total	,0%	,0%	2,5%	2,5%
Total		Count	5	5	30	40
		% of Total	12,5%	12,5%	75,0%	100,0%

The results of the study showed that the majority of respondents had a long use of birth control pills for 12-24 months with no work as many as 10 respondents (25%).

Table 10. Cross tabulation between the incidence of hypertension and age in women of childbearing age in Paleleh Health Center, Paleleh District, Buol District, Central Sulawesi Province on 17 July-17 August 2018 (n = 40)

			Umur			Total
			26-35 tahun	36-45 tahun	46-55 tahun	
Kejadian Hipertensi	Stadium 1 (Hipertensi ringan)	Count	3	5	3	11
		% of Total	7,5%	12,5%	7,5%	27,5%
	Stadium 2 (Hipertensi sedang)	Count	0	12	3	15
		% of Total	,0%	30,0%	7,5%	37,5%
	Stadium 3	Count	1	0	13	14



	(Hipertensi berat)					
		% of Total	2,5%	,0%	32,5%	35,0%
Total		Count	4	17	19	40
		% of Total	10,0%	42,5%	47,5%	100,0%

The results of the study showed that most respondents had the incidence of stage 3 hypertension with age 46-55 years as many as 13 respondents (32.5%).

Table 11. Cross Tabulation between incident hypertension in women of childbearing age education in Paleleh Health Center, District Paleleh, Buol in Central Sulawesi Province on the 17th July- August 17, 2018 (n = 40)

			Pendidikan			Total
			SD	SMP	SMA	
Kejadian Hipertensi	Stadium 1 (Hipertensi ringan)	Count	1	3	7	11
		% of Total	2,5%	7,5%	17,5%	27,5%
	Stadium 2 (Hipertensi sedang)	Count	3	5	7	15
		% of Total	7,5%	12,5%	17,5%	37,5%
	Stadium 3 (Hipertensi berat)	Count	3	2	9	14
		% of Total	7,5%	5,0%	22,5%	35,0%
Total		Count	7	10	23	40
		% of Total	17,5%	25,0%	57,5%	100,0%

The results of the study showed that most respondents had the incidence of stage 3

hypertension with high school education as many as 9 respondents (22.5%)

Table 12. Cross Tabulation between duration of use birth control pills with incident hypertension in women of childbearing age in Puskesmas Paleleh, District Paleleh, Buol in Central Sulawesi Province on the 17th July- August 17, 2018 (n = 40)

			Kejadian Hipertensi			Total
			Stadium 1 (Hipertensi ringan)	Stadium 2 (Hipertensi sedang)	Stadium 3 (Hipertensi berat)	
Lama Penggunaan KB Pil	<12 bulan	Count	4	0	0	4
		% of Total	10,0%	,0%	,0%	10,0%
	12-24 bulan	Count	7	11	0	18
		% of Total	17,5%	27,5%	,0%	45,0%
	25-36 bulan	Count	0	4	7	11
		% of Total	,0%	10,0%	17,5%	27,5%
	37-48 bulan	Count	0	0	6	6
		% of Total	,0%	,0%	15,0%	15,0%
	49-60 bulan	Count	0	0	1	1
		% of Total	,0%	,0%	2,5%	2,5%
Total		Count	11	15	14	40
		% of Total	27,5%	37,5%	35,0%	100,0%

The results of the study showed that most respondents had a long duration of pill



use for 12-24 months with the incidence of stage 2 hypertension as many as 11 respondents (27, 5%).

Table 12. Test Results Statistics

Correlations				
			Lama Penggunaan KB Pil	Kejadian Hipertensi
Spearman's rho	Lama Penggunaan KB Pil	Correlation Coefficient	1,000	,851**
		Sig. (2-tailed)	.	,000
		N	40	40
	Kejadian Hipertensi	Correlation Coefficient	,851**	1,000
		Sig. (2-tailed)	,000	.
		N	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

The statistical test results obtained $p = 0,000$ with $\alpha = 0,05$, which means that H_0 is rejected and H_1 is accepted so that it can be interpreted that there is a significant relationship on the old variable of use of pill with the incidence of hypertension, with a correlation coefficient of 0.851 which means having a strong relationship.

Discussion

has the incidence of stage 2 hypertension as many as 15 respondents (37.5%), and at least has the incidence of stage 1 hypertension of 15 respondents (27.5%).

Hypertension or high blood pressure is an abnormal increase in blood pressure in the arteries continuously for more than one period. This happens when the arteriole-arteriole is constricted. Contrast arterioles

make it difficult for blood to flow and increase pressure against arterial walls. Hypertension adds to the workload of the heart and arteries which if it continues can cause damage to the heart and blood vessels (Udjianti, 2014). Several factors are thought to be related to the development of essential hypertension such as genetics, sex and age, diet, lifestyle

Based on the results of research on the incidence of hypertension in women of childbearing age using KB pill contraception in the village of Paleleh Health Center, Paleleh District, Buol District has the most stage 2 hypertension This situation occurs when the blood pressure in the main arteries in the body is too high. Hypertension is now increasingly common in the elderly. Hypertension is a disorder that is difficult for our body to know. The only way to find out hypertension is to measure your blood pressure regularly (Shanty, 2011). This state of hypertension can be caused due to KB hormonal response or adrenal response. Adrenal medullary dysfunction or the adrenal cortex can cause secondary hypertension. *Adrenal-mediated hypertension* is caused by excess primary aldosterone, cortisol, and catecholamines. In primary aldosteronism, excess aldosterone causes hypertension and hypokalemia.

Based on the results of the study it was found that at most respondents had the incidence of stage 3 hypertension with ages 46-55 years as many as 13 respondents (32.5%). The higher the age, the function of the heart will also decrease. According to (Susilo, 2011) the handling of hypertension depends on the attitude and discipline of the sufferer. Actually, to prevent hypertension, it is almost the same as prevention in various diseases in general, namely the existence of a healthy diet and a healthy lifestyle. Usually the more age a person has to be able to prevent symptoms of acute illness, by carrying out a healthy diet and a healthy lifestyle. There are some respondents who have stage 3 blood pressure, some



respondents use Microgynom brand birth control pills which have high hormone content which allows high blood pressure.

The results of the study showed that most respondents had a longer use of birth control pills for 12-24 months with the incidence of stage 2 hypertension in 11 respondents (27.5%). The statistical test results obtained $p = 0,000$ with $\alpha = 0,05$, which means that H_0 is rejected and H_1 is accepted so that it can be interpreted that there is a significant relationship on the old variable of use of pill with the incidence of hypertension, with a correlation coefficient of 0.851 which means having a strong relationship. Based on the results of the research that the relationship between the use of birth control pills and the incidence of hypertension is in accordance with research that can cause cardiovascular disorders.

Women should not choose pills, if they have tumors that are influenced by estrogen hormones, such as uterine tumors and breasts, have active liver disease, vascular disease or varices thrombophlebitis, have had a stroke and have diabetes (Sulistyawati, 2013). They absolutely must not take pills, and must choose another method of contraception. Hypertension or high blood pressure is an abnormal increase in blood pressure in arteries continuously for more than one period (Sulistyawati, 2013). This happens when the arteriole-arteriole is constricted. Constricted arterioles make it difficult for blood to flow and increase pressure against arterial walls. Hypertension adds to the workload of the heart and arteries which if it continues can cause damage to the heart and blood vessels.

Based on the results of the study, it was found that there was a significant relationship on the variable length of birth control pills with the incidence of hypertension, with a correlation coefficient of 0.851 which means having a strong relationship. The use of birth control pills is longer then it can increase the risk of hypertension, it is also supported by age factors, education which may have an indirect impact. This shows that prolonged

use of birth control pills can affect blood pressure, the impact of using birth control pills in the long term needs to be considered to reduce the adverse effects of using long-term birth control pills. Prevention and further planning in the use of family planning need to be continuously evaluated to get optimal results.

Conclusion

1. The results of the study showed that at most respondents had a duration of 12-24 months for the use of family planning as many as 10 respondents (52.6%).
2. The results showed that more than half of the respondents had the incidence of stage 2 hypertension of 15 respondents (37.5%).
3. The statistical test results obtained $p = 0,000$ with $\alpha = 0,05$, which means that H_0 is rejected and H_1 is accepted so that it can be interpreted that there is a significant relationship on the old variable of use of pill with the incidence of hypertension, with a correlation coefficient of 0.851 which means having a strong relationship.

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