



# The Relationship of Contraception Pill Use with Hypertension Even

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**Abstract.** The use of contraceptive methods, such as hormonal contraception need to consider various factors, starting from health status and side effects that will arise during its use. Long use of hormonal contraception closely related with the occurrence health problems experienced by women of childbearing age hormonal contraceptive users. One of the health problems that can be experienced women of childbearing age hormonal contraceptive users increased blood pressure According to WHO (World Health Organization 2020) hypertension sufferers more happening in women (30%) compared to men (29%). This is because use of hormonal contraceptives be one risk factors for hypertension. The research method is quantitative with a Cross Sectional Study approach. The Research done At the Khodijah Clinic on 55 mothers. The Data analysis used is Chi Square. The results of the research are: relationship between use contraceptive pill with hypertension at the Khodijah Clinic in 2021” with P value 0.001. Expected Need to do blood pressure control actively i.e. once every 1 months, especially for pil contraceptive users and increase knowledge and awareness to maintain a healthy lifestyle.

**Keywords:** pil contraception · Hypertension

## 1 Background

According to the World Health Organization (WHO), family planning is an action that helps individuals or married couples to avoid unwanted/planned births, get the births they want, regulate the interval between pregnancies, control the time during pregnancy in relation to the age of husband and wife and determine the number of children in the family while Family Planning (KB) or Family Planning/Planned Parenthood is an attempt to space or plan the number and spacing of pregnancies by using contraceptives so that they can create a small, happy and prosperous family. (Maritalia 2014).

According to WHO (World Health Organization 2020) hypertension sufferers are more common in women (30%) than men. This is because the use of hormonal contraceptives is one of the risk factors for hypertension. Based on Riskesdas 2020, the incidence of hypertension in Indonesia is a disease or health problem with the highest prevalence, which is 34.1%. The use of contraception or family planning in Indonesia has increased from 59.7% in 2016 to 64% in 2020. The hormonal type of family planning is the most used tool/method used by family planning acceptors, which is 49% with details, injections (29%), Pills Family planning (12%), and implants (5%).

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Indonesian Health Profile, 2020. Indonesia is a country that has the most women of childbearing age (WUS) compared to countries in ASEAN, which are 65 million women of childbearing age. The rate of use of contraceptives in Indonesia also exceeds the average use of contraceptives in ASEAN countries where the average use of contraceptives in ASEAN countries is 58.1%. Indonesia occupies the prevalence of hypertension in adults is 6–15% (Ministry of Health RI 2019).

The prevalence of hypertension in North Sumatra Province reaches 6.7% of the total population in North Sumatra, based on data from the Research and Development Agency of the Ministry of Health. This means that the population of North Sumatra who suffers from hypertension reaches 12.42 million people spread across several districts (Ministry of Health 2020).

Based on the Health Profile Data of North Sumatra Province in 2020, the number of PUS in Medan City in 2012 was 326,606 people. New family planning participants in 2012 were 46,751 people (14.31%), with the following percentages: Condom participants were 4,292 (9.18%), Pill participants were 13,380 people (28.62%), injection participants were 17,513 people (37.46%), IUD participants were 3,360 (7.19%), implant participants were 3,122 (6.68%), MOW participants were 2,197 (4.70%) and MOP participants were 2887 (6.18%). Based on the Health Profile Data of North Sumatra Province in 2020, active family planning participants were 221,063 people (67.68%), with the following percentages: 13,127 condom participants (5.94%), 69,404 pill participants (31.40%), injection participants were 77,711 people (35.15%), IUD participants were 29,245 people (13.2%), implant participants were 16,025 people (7.25%), MOW participants were 13,414 people (6.07%) and MOP participants were 2137 people (0.97%).

Based on the results of the research, Isfandari et al. (2015) stated that women who use hormonal contraceptives have a 10% higher risk of developing hypertension compared to women who use non-hormonal contraceptives.

The initial survey of the study in the Batunadua Public Health Center, Padangsidimpuan City, found that 9 out of 10 women of childbearing age experienced hypertension as a result of the use of contraceptive pills. The selection of the right contraceptive method is one thing that needs to be considered by the community, especially for women of childbearing age who are married, because each type of contraception has advantages and disadvantages.

Based on the data above, the researcher is interested in conducting a study with the title “The relationship between the use of contraceptive pills and the incidence of hypertension in the Batunadua Health Center Work Area, Padangsidimpuan City”.

## 2 Method

This research is a quantitative research with a cross sectional study design. The location of the research was carried out in the Batunadua Health Center Work Area, Padangsidimpuan City. The time of the study was carried out in August 2021. The population in this study were all women of childbearing age in the working area of the Batunadu Health Center, Padangsidimpuan City with a purposive sampling technique with a sample of 40 people. Data analysis was carried out using the Chi Square Test.

**Tabel 1.** Distribution of Characteristics of Women of Childbearing Age by Age, Education, Occupation and Number of Children

Variabel	F	(%)
<b>Age</b>		
17–25 tahun	15	41,5
26–35 tahun	31	17,1
36–45 tahun	9	41,5
<b>Education</b>		
SD	6	10,9
SMP	11	20,0
SMA	25	45,5
PT	13	23,6
<b>Occupation</b>		
IRT	32	68,2
PNS	12	21,8
Wiraswasta	11	20,0
<b>Number of Children</b>		
<2 anak	15	27,3
>2 anak	40	72,7
<b>Total</b>	<b>55</b>	<b>100</b>

**Tabel 2.** Frequency distribution of contraceptive pill use in women of childbearing age

Kriteria	F	(%)
Yes	28	50,9
No	27	49,1
<b>Total</b>	<b>55</b>	<b>100</b>

### 3 Result

Results Table 1. In terms of age, the majority of respondents aged 26–35 were 31 people (51.4%), the minority aged 36–45 years were 9 people (16.4%). The education of the majority of respondents is SMA as many as 25 people (45.5%), and the minority from elementary school is as much as 6 people (10.9%). The occupations of the majority of the respondents are 32 people (58.2%) and the self-employed minority as many as 11 people (20.0%). The majority of children > 2 children are as many as 40 people (72.7%) and the minority < 2 children are 15 people (27.3%).

**Table 3.** Frequency Distribution of Hypertension Incidence in Women of Childbearing Age

Kriteria	F	(%)
Hypertension	29	52,7
No Hypertension	26	47,3
<b>Total</b>	<b>32</b>	<b>100</b>

**Table 4.** The relationship between the use of contraceptive pills and the incidence of hypertension in women of childbearing age

Pill Contraception	Hypertension		No Hypertension		Total	P Value
	F	%	F	%		
Yes	21	75,0	7	25,0	28	0,001
No	8	29,0	19	70,4	27	
<b>Total</b>	<b>29</b>	<b>52,7</b>	<b>26</b>	<b>47,3</b>	<b>55</b>	

The results of Table 2 majority use pill contraception as many as 28 people (49.1%) and the minority do not use pill contraception as many as 13 people (49.1%).

The results of Table 3 the majority of respondents experienced hypertension as many as 29 people (52.7%) and the minority did not have hypertension, namely as many as 26 people (47.3%).

The results of Table 4. The majority of respondents who use oral contraceptives have hypertension, as many as 21 people (75.0%). The majority of respondents who did not use PIL contraception did not experience hypertension, as many as 19 people (70.4%). The results of the chi-square test where the value of  $p = 0.001$  ( $p < 0.05$ ) this indicates that  $H_0$  is rejected, meaning that there is a relationship between the use of oral contraceptives and the incidence of hypertension in women of childbearing age.

## 4 Discussion

### 4.1 Use of Contraceptive Pills in Women of Childbearing Age

The results of this study indicate that from 55 respondents, there are 28 respondents (50.9%) who use pill contraceptives, and 27 respondents (49.1%) who do not use pill contraceptives.

All respondents in this study participated in the Family Planning program and all respondents actively used hormonal contraception. This study is in line with research conducted by Olivia (2017). The results of this study indicate that of 71 respondents, there are 50 respondents (70.4%) who use hormonal contraceptive pills, and 21 respondents (29.6%) who do not use contraceptives. Hormonal pills or using other hormonal contraceptives.

Birth control pills include progestin-only pills that contain the hormone progestin, also known as breastfeeding pills, and combination pills that contain the hormones estrogen and progesterone. While injectable contraceptives include combination injections (1 month) and tribulan injections or progestins. According to Bustan, the risk of hypertension increases with the duration of using birth control pills, which increases 5 times compared to 1 year of use (Bustan 2017).

#### **4.2 The Incidence of Hypertension in Women of Childbearing Age**

The results of this study indicate that from 55 respondents, there are 29 respondents (52.7%) who have hypertension and 26 respondents (47.3%) who do not have hypertension.

This research is in line with research conducted by Sondakh (2018). Based on the results of the study, blood pressure measurements in women of childbearing age were known to have hypertension in 52 respondents (73.2%), and those without hypertension. Especially the respondent's birth control pills (26.8%).

#### **4.3 Correlation Between the Use of Contraceptive Pills and the Incidence of Hypertension in Women of Childbearing Age**

The results of the chi-square test where the value of  $p = 0.001$  ( $p < 0.05$ ) this indicates that  $H_0$  is rejected, meaning that there is a relationship between the use of oral contraceptives and the incidence of hypertension in WUS.

Research conducted by Wati (2018) where the results obtained that the  $p$  value = 0.02 ( $p > 0.05$ ) and the prevalence ratio is 1.244 ( $RP > 1$ ), it can be interpreted that there is no significant relationship between the type of hormonal contraception on the incidence of However, the prevalence ratio value obtained is more than one, so although not statistically significant, it is significant based on prevalence calculations with very weak power as a risk factor.

According to the researcher's assumption, the longer the use of contraceptive pills, the higher the risk of hypertension because the contraceptive pill contains high estrogen, which can affect electrolyte metabolism, which can accelerate atherosclerosis and trigger hypertension.

## **5 Conclusion**

Based on the conclusion from the results of the respondents who used the contraceptive pill the majority experienced the incidence of hypertension, namely as many as 21 people (75.0%). The majority of respondents who did not use oral contraceptives did not experience hypertension, as many as 19 people (70.4%). The results of the chi-square test where the value of  $p = 0.001$  ( $p < 0.05$ ) indicates that  $H_0$  is rejected, meaning that there is a relationship between the use of contraceptive pills and the incidence of hypertension in women of childbearing age (WUS) in the Batunadua Public Health Center, Padangsidimpuan City in 2021.

It is suggested that this study can provide new information or data for further researchers to conduct research with other variables related to the relationship between age and duration of use of contraceptive pills with the incidence of hypertension. And. It is hoped that it can facilitate health education for family planning acceptors in the use of appropriate contraceptives, especially in terms of maintaining blood pressure stability so that hypertension does not occur.

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