


## Risk Factors For Hypertension In Pregnant Women

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Article Info	ABSTRACT
<b>Keywords:</b> Factors, Hypertension, Pregnancy.	Hypertension is blood pressure more than 140/90 mmHg. Hypertension is a world problem that has hit the world. According to WHO (World Health Organization) information, pregnancy hypertension is one of the causes of maternal and infant morbidity and death throughout the world. The novelty in this research is because it examines Literature Review: Factors Associated with Hypertension in Pregnancy. The aim of this research is to determine the factors associated with the occurrence of hypertension in pregnant women. This research method is that the literature is taken from 14 ISSN journals. At the search stage, journals were taken from Elsevier and Google Scholar. The articles were taken from 2018-2023 using the keywords AND hypertension AND pregnancy factors. The results of this research taken from several journals show that the factors related to hypertension in pregnancy are age, while the most dominant factor is age. parity, nulliparity, primipara, preeclampsia, obesity, education, employment, food consumption, and family.
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### INTRODUCTION

Hypertension is a cardiovascular disease that affects many people in the world. Around one million people in the world suffer from hypertension and two out of three of these people are in developing countries. According to data from the World Health Organization (WHO), the death rate for pregnant women caused by hypertension reaches 14% of all cases of death for pregnant women.

Hypertension is a medical problem that is often found in pregnancy, with an incidence rate of around 2-4%. Hypertension disorders in pregnancy (hypertension pregnancy disorder) cause increased maternal, fetal and fetal morbidity and mortality. Pregnant women with hypertension have a high risk of complications including placental abruption, cardiovascular disease, organ failure and intravascular coagulation.

Maternal Mortality Rate (MMR) is one of the ultimate indicators to see the degree of maternal health. The maternal mortality rate is one of the third targets of the Sustainable Development Goals (SDGs), namely ensuring a healthy life and promoting well-being for all people at all ages. The SDGs target is 70 per 100,000 by the end of 2030. The maternal mortality rate (MMR) is still 359 per 100,000 live births, the maternal mortality rate is still considered high. Meanwhile, the target at the end of 2019 is 306 per 100,000 live births.

WHO reports that around 287,000 maternal deaths in 2010, around 85% occurred in developing countries. Meanwhile in the country of Southeast Asia, it is 150 mothers per 100,000 live births. Indonesia is ranked 14th out of 18 countries in ASEAN (Association of Southelast Asian Nations).

Based on research by Fahira (2017), a history of hypertension is a risk factor for the occurrence of preeclampsia, in other words, a history of hypertension carries a 1.591 times greater risk of experiencing prelexia than people who do not have a history of hypertension. Based on the results of Lina's research (2013), 2 respondents from the hypertension group stated that they were living in a group with > 1 active smoker, whereas in the group without hypertension there was only 1 partner. This means that passive smokers who were living in a group with > 1 active smoker had a risk of 1.85 times that of a group of people with diabetes. 1 active smoker is likely to develop hypertelonia.

Based on research results from Sri (2016), the highest proportion of mothers giving birth with hypertelinia was in the group of mothers who had given birth > 3 times, namely 74%. Based on research results from Ridha (2013), there was a correlation between the level of stress experienced by pregnant women, namely 47.6%.

## METHOD

This research is a Litelratulrel Relvielw research with Narrative Relvielw research. This method is used to identify, study, evaluate and interpret available research cells. By using this meltodel, review and identification of journals can be carried out systematically, with each process following the steps or protocols that have been determined. In this research we also use the PICO method in searching for literature

The types of data in this research include cellular data, namely databases from various research journals, research journals, journal reports, annual reports, volumes and data relating to hypertelinosis in pregnancy which is caused by the occurrence of 4 neurological development disorders in children right in 2019 -2023. The literature search was carried out using the electronic database, namely Google Scholar, Clinical Kelly, PulbMeld, Researchgate, national survey results including RIKEISDAS, PSG and WHO, searched by using the key words: Hypertension in pregnancy. Content analysis is carried out by using a synthesis table by comparing research methods, research methods and research objects, and the variables studied include risk factors for hypertension in pregnancy.

## RESULTS

No	Authors	Publisher	Objective study	Subject	Method	Result
1	Tetti Surlanti, Ruslang, Rosdiana (20210)	Bhakti Hasada Health Sciences	The aim of this research is to find out the factors that contribute to the occurrence of hypertelnsion	This Sulbyelk research is pregnant women who are pregnant between 20 weeks to 32	This research implements observational research by enhancing cross-selective	The results of this research are based on the statistical results carried out using the Chis Qulelrel test method and obtained a value of p = 0.001,

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			in pregnant women in the UIPT Pulskelmas Wosul work area based on maternal ulcers, history of hypertelinsion, exposure to cigarette smoke, and pregnancy stress.	weeks of pregnancy in the UIPT Pulskelmas Wosul work area, West Bulngkul District, Morowali Regency	research configurations.	where the value is $\alpha = 0.05$ , which means that there is an association with hypertelinsion in pregnant women in the working area of UIPT Pulskelmas Wosul, West Bulngkul District, Morowali Kabulpateln.
2	Nen Sastri (2021)	Masker Medika	The aim of this research is to find out the relationship between maternal age, history of hypertension, maternal labor, and parity with the occurrence of hyperthermia in pregnancy in pregnant women at PMB Delwi Anggraini Palelmbang.	The main focus in this research are pregnant women who became the population at the Independent Practice of Midwives Delwi Anggraini Palelmbang in the months of January to December 2020.	The research design used is observational research with cross-selective enhancement.	The results of this research are based on the results of a statistical test using the Chi Square test with Continuity Correlation which shows a value of $p = 0.015$ ( $p < 0.05$ ), that there is a significant relationship between the history of family hypertension and the occurrence of hypertelncia.
3	R.Nur Abdurakhman (2020)	Health and Science	The aim of this research is to find out the relationship between maternal ulcers, history of hypertension, maternal labor, and parity with the occurrence of hyperthermia in pregnancy in pregnant women in the	Sulbjelk in this research is n in the working area of Pulskelmas Gulnulg Jati ulntulk category ulmulr 20-35 years ulmulr maternity with the occurrence of hypertelnsi in pregnancy	The method used in this research is a highly analytical method with cross-selective enhancement	The results of this research are data analysis in this research using the chi square test. The results of the test showed that there was an influence of knowledge factors, ulcer factors, and parity factors on the occurrence of hypertelrescence in pregnancy.

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			Gulnulg Jati Health Center work area.			
4	Flora Naibaho (2021)	Health and Science				
5.	Aryananda Andika, Hendrik Kurniawan, Anna Maria Dewajanti (2018)	Health and Science	The aim of this research is to find out the factors that contribute to the occurrence of hypertelinsia in pregnant women in the Nullnpelnel Community Health Center, North East Central Kalimantan, Central Kalimantan in 2018.	The sample of capsules was taken from data on the number of pregnant mothers who had hypertelinsion, which was 30 mothers, while the total control sample of pregnant mothers who did not experience hypertelnsion was 30 mothers.	The research method uses analytical research by improving casel control or cases and controls, using primary data by collecting data on controls or pregnant women who do not have hypertelinsion and cell data by taking related data with cases of pregnant women who have hypertelinsion.	The results of this research are ultimate ulnivariate analysis, knowing the frequency distribution of each variable, and bivariate analysis with Chi Square and a confidence level of 95% ( $\alpha < 0.05$ ).
6	Ni Putu Windi Sukma Putri (2019)	Jurnal Medika Udayana	The aim of this research is to find out the factors that contribute to hypertension in pregnancy at the Kelbon District Community Health Center Jelruk Agulstuls 2016	The study carried out a total of 102 mothers with the sampling technique used was conselcultivel sampling. The variable number of cases of hypertension occurred during pregnancy	This research carried out an analytical study design with cross-selective enhancement which was carried out in the month of August 2016 at the Kelbon Jelruk District Community Health Center	The results of this research are the analysis used is Chi Squarel and Ulji Fishelr with a significance level of 0.05%, with a confidence level of 95% using the SPSS v16 program. Statistical tests showed that there was a significant relationship between the occurrence of hypertelnsion in

No	Authors	Publisher	Objective study	Subject	Method	Result
				and the variable number of cases of hypertension, grvida, and history of hypertension.		pregnancies with ulcers (p=0.016), number of pregnancies (p=0.003), and history of hypertelnsion (p=0.002).
7	Quan, Li Mei Xu, Qiu Lian Zhang, Gen Qin Wu, Lin Lin Xu, Heng (2018)	Kaohsing Journal of Medical Sciences	The aim of this research is to find out the factors that contribute to the occurrence of pre eclampsia at RSUIP Sanglah Delnpasar	The final part of this research is the birth period from January to December 2018 at RSUIP Sanglah Delnpasar	Systematic random sampling	The results of this research showed that the factors that most cause pre eclampsia are ulceration and parity (nulliparity).
8	Abharham Martadiansyah , Anugrah Qalbi, Budi Santoso (2019)	Sriwijaya Journal of Medicine,	This research is ultimately aimed at understanding the risk factors and predictive value of combined biochemical indicators in preeclampsia.	The main focus in this research is that the patient's cells have the ultimate diagnostic criteria for pre eclampsia. At the same time, 435 pregnant women who underwent antenatal examination in the same time period and were found to have no obstetric complications were included as the control group.	Cross selective	The results of this research show that the highest risk factors for the occurrence of preeclampsia are a history of hypertension, advanced age, high blood lipids, BMI (obesity), and a history of diabetes.
9	I Putu Fery	Health	The aim of this	Subjelct in	Cross	The results of this

No	Authors	Publisher	Objective study	Subject	Method	Result
	ImmanueWhite, Rahma, Miranti, Ibtisam (2020)	Tadulako Journal	research is to find out the prevalence and risk factors for the occurrence of pre-eclampsia with complications at RSUIP Dr. Mohammad Hoelsin Palembang period 1 January 2015 – 31 Delselmbelr 2017.	this research are patients who have given birth with or without a diagnosis of pre-eclampsia with complications who have met the inclusion and exclusion criteria in the Obstetrics and Gynecology Department of RSUIP Dr. Mohammad Hoelsin Palembang period 1 January 2015 – 31 Delselmbelr 2017.	selective	research showed that the factors that most cause pre-eclampsia with complications are a history of hypertelinosis during pregnancy, maternal age $\geq$ 35 years, BMI 23.0 kg/m <sup>2</sup> and nulliparity.
10	Stephanie Braunthal and Andrei Brateanu (2019)	SAGE Open Medicine	The aim of this research is to find out the risk factors for the occurrence of pre-eclampsia at the Talisel Community Health Center in 2018. In this way, this research is to identify the factors that contribute to the occurrence of pre-eclampsia in pregnant women at the	The Sulbyelk in this research are pregnant women who have their womb checked at the Talisel Community Health Center during January-Delselmbelr 2018. The total population in this research is 212 people with the	Case control	The conclusion of this research is that ulcer risk factors, nulliparity/primiparity, and employment status are factors

No	Authors	Publisher	Objective study	Subject	Method	Result
			Talisel Community Health Center, Palul.	number of samples used being 139 pregnant women.		
11	Andi Nurfadilah Syama , Andi Tihardimanto (2023)	Ibnu Sina	The aim of this research is to discuss differences in the definition and diagnostic criteria for hypertelonia in pregnancy in all international guidelines, as well as to explore the use of pharmacological and non- pharmacological therapies in the management of hypertelonia in pregnancy.	Sulbjelk in this research are the factors that are responsible for the occurrence of hypertelinsion in pregnant women in the Kassi Kassi Community Health Center and Dahlia Community Health Center, Makassar City in 2019-2020. A total of 116 samples, with 58 samples being in the patient group, and 58 others not being in the control group.		The results of this research are that there is a significant relationship between LILA and the occurrence of hypertelinsion in pregnant women. Meanwhile, maternal age, parity and history of abortion do not have a significant influence on the incidence of hypertelonia in pregnant women at the Kassi Kassi Community Health Center and Dahlia Community Health Center, Makassar City in 2019-2020.
12	Hasan Basri, Rismayanti Akbar, Indra Dwinata (2018)	Medicine and Health,	Tuljulan Ulntulk understands the factors that influence the occurrence of hypertelornia in pregnant women.	The population in this research is the total number of pregnant women in the Kassi-Kassi Health Center work area, Makassar City, which is recorded in the regional	Meltodel	

No	Authors	Publisher	Objective study	Subject	Method	Result
				register with a sample size of 138 people.		
13	Wiranto Natalia Desy Putriningtyas (2021)	Journal of Public Health and Nutrition	This research has actually helped to find out the factors that contribute to the occurrence of hypertelinosis in pregnant women in the work area of the Kassi-Kassi Community Health Center, Makassar City.		This research implements a cross selective design with a casel control study research design	The results of this research were to show that there was a relationship between the weight of pregnant women, family health, stress conditions of pregnant women, increased body weight, and overall food consumption in pregnant women ( $p=0.000$ ) and there was no relationship between pregnant women and level of education ( $p= 0.615$ ). It is recommended for pregnant women to reduce fast food, control stress and for families to provide social support throughout the mother's pregnancy until birth.
14	Herli Gustian (2018)	Medical Periodicals		The object of this research is the risk factors for the occurrence of hypertension in pregnant women in the Gulnulingpati Pulskelmas Kelrja Kelrja area, Selmarang City. This research is aimed at	Analytical observation	



No	Authors	Publisher	Objective study	Subject	Method	Result
				analyzing the relationship between the nutritional status of pregnant women's cells, sodium intake, potassium growth, calculi cells, gravidity, maternal ulcers, and the family history of hypertelnia and the occurrence of hypertelnia in pregnant women.		

Four dozen journal articles were analyzed by using a final synthesis table to look at the variables studied by each researcher and their relationship to the incidence of hypertelinsion in pregnant women. Of the 14 articles that discuss the history of hypertension in pregnant women. 12 articles reported that there were significant results, 2 articles reported that there were no significant results. eight articles implemented cross-selective improvements (juls 1, 2, 3, 5, 7, 8, 12, 14), four articles implemented casel control designs (juls 4, 9, 11, 13) one article implemented random sampling (juls 6) and one article is not known to use research methods (julrnal 10).

The results of the analysis were grouped into one category and their relationship was related to the occurrence of hypertelornia disorders in pregnant women, namely: history of pregnancy hypertelinsion in the elderly, parity, obesity, preleclampsia, food. Pelnullis identified 14 articles that discussed hyperthermia in pregnant women and there were several similarities from the published articles, namely journals where the results of bivariate and ulnivariate analysis using Chi Squarel's test and Fishelr's test showed a significant correlation between several variables and hypertelinsion in pregnant women Pregnancy is one of the factors the most dominant influence on ulcers, parity, nulliparity, primipara, preleclampsia, obesity, education, work, food consumption, and family <0.05.

One of the advantages of several published articles is the use of data that is representative both nationally and internationally with a recent investigation and a large enough sample size to analyze the correlation between different variables regarding hypertelinsion in pregnant women in December Cellbult research is also carried out on it

several variables that can be significant risk factors for the occurrence of pregnancy hyperthermia, ulcer cell, pre-eclampsia as a risk factor. Pre-eclampsia is a clinical symptom during pregnancy (after 20 weeks of gestation) which is characterized by an increase in blood pressure (>140/90 mmHg) in women whose blood pressure is low. normal at 20 weeks of pregnancies. The exact cause of pre-eclampsia (one of the triad of mortality) is still not yet understood, although there are several risk factors and theories that have been developed related to pre-eclampsia. Risk factors for developing pre-eclampsia are ulceration, nulliparity, history of cellular pre-eclampsia, history of hypertension and diabetes mellitus, family history and obesity. This is important to implement complete intelligence to reduce the risk of hypertension during pregnancy.

One drawback that should be noted in some of these articles is that the use of data from literature reviews can lead to bias in the selection of the data sources used. Researchers may have the ultimate error in selecting data that reflects their own hypothesis, which can impact the research results and cause bias in personal research. In addition, the aggregate data available in the literature study may not cover the complete scope of answering all the research questions at hand.

### Discussion

Based on the results of the literature study above, it can be explained what is related to perception, awareness and attitude in patients with hypertelinsion. Hypertelinsion in Pregnant Women with breasts less than 20 years old, the development of reproductive organs and their abilities are still not yet ideal and emotional and their mental health is underdeveloped/mature and will ultimately affect the baby being conceived, this will lead to early pregnancy problems. Hypertelnsion due to sales problems Elndotell and hypertelnsi also occur in those over 35 years of age because hypertelnsia can harm the pregnancy from a dangerous period from around 20 years old to around 35 years old<sup>5</sup>. The quantitative rate of hypertelinsion in this research was found to be that pregnant women who experienced hypertelinnia were based on age and the level of hypertelnsion was 20 respondents (66.7%). Hypertelinsion in pregnancy is a clinical problem that often occurs and can cause various complications such as eclamptic seizures, cerebral hemorrhage, and LBW<sup>6</sup>. A history of hypertension has a 4-fold risk of developing hypertelnsion compared to pregnant women without a history of hypertelnsion. Hypertelinsion in pregnant women has different effects, ranging from mild hypertelnsion to chronic hypertelinsion. Hypertelnsion in pregnancy is divided into mild hypertelnsion, severe hypertelnsion, elklampsia, and sulpelimposeld hypertelnsion (pregnant women who have already experienced pregnancies and latent hypertelinsion during pregnancy).

Melnulrult Delpkels RI in 1996 maternal ulcers during pregnancy are one of the internal factors that play an important role in pregnancy. The safe age for pregnancy in healthy reproduction is between 20-36 years. Maternal ulcers that have a high risk of getting pregnant are ulcers less than 20 years old or  $\geq$  35 years old<sup>9</sup>. Age 20-30 years is the safest period for getting pregnant/giving birth. Women who are at the beginning or end of reproductive age are considered vulnerable to experiencing pregnancy complications. In the year after the first menstruation, a woman may still achieve a hip growth of between 2-7% and a height of 1%<sup>10</sup>. The impact of insufficient ulcers can cause complications during

pregnancy. Every primigravida teenager has a greater risk of experiencing hypertelonia during pregnancy<sup>11</sup>. The effect of increasing maternal age on pregnancy hypertension is the same, and increases again when the age is above 35 years. Hyperteliosis in pregnancy most often affects elderly women. As a result of the growth of the ulcer and the process of aging, the collagen cells in the blood vessels and the walls of the arterioles increase in number of cells until the walls of the cells of the growth cells fuse. With this reduced elasticity, the area affected by systolic pressure will narrow the cells so that the average blood pressure increases. Based on the RI Delpkels in 2004, the safest age for giving birth is 20-35 years. Late ulmulr (20 years old) late late ulmulr (>35 years old) have a high risk of pregnancy.

Based on the results of the above research carried out in the Gulnulg Jati Pulskselmas work area in the 20-35 year old category, there were 9 responses with hypertelinsion in pregnancy, while the group < 20 years old had no response with hypertelinsion in pregnancy an and in the ulcer group >35 years there were 7 response to hypertelonia in pregnancy. From the results of the analysis between the maternal age and the incidence of hyperthermia in pregnancy, it can be concluded that the highest incidence of hypertelnsion cases in pregnancy is at the 20-35th birthday (13). For this reason, the health department must provide information to all pregnant women, both those who are hypertelic in pregnancy and those who are not hypertelic in pregnancy, that pregnant women aged 20-35 years are also at risk of developing pregnancy disorders, especially those who are >35 years old there is a risk of it happening Pregnancy disorders, therefore counseling or counseling must be carried out for pregnant women so that they can carry out their pregnancy regularly, for example, birth control contraception to prevent pregnancy.

The age that is safe for pregnancy and childbirth is 20-35 years old. Maternal complications in pregnant and giving birth women aged under 20 years have been found to be 2-5 times higher than maternal deaths that occur in those aged 20-35 years. The impact of underage age can cause complications during pregnancy. <sup>14</sup> Every primigravida teenager has a greater risk of experiencing hyperteliosis during pregnancy and this increases when the age is over 35 years. The age range that has a high risk of pregnancy is less than 20 years or more than 35 years, at the age of less than 20 years, fertility increases and pregnancy is still low until pregnancy occurs, so also at the age of more than 35 years the physical condition has begun melnulruln and the durability of the cells is also no longer optimal and they are susceptible to complications from cell diseases, so there is a greater risk of developing a pregnancy. <sup>15</sup> Ulcers that are safe for pregnancy are also known by the term healthy reproduction, namely between 20-35 years old, and are said to be safe because of maternal death in pregnant women and giving birth at the late age range is actually 2 to 5 times lower than maternal deaths that occur at the age range less than 20 years or more than 35 years.

Mothers included in the risk group, namely those aged under 21 years and over 35 years, found 56% who were hypertelic and 44% who were not hypertelic. Meanwhile, maternal age who are not at risk (between 21 years - 35 years) there are 24% who are hypertelic and 76% who are not hypertelic. From the results above, it is clear that the fetus

has matured between 21 years and 35 years, anatomically and physiologically, the reproductive organs have developed and function optimally. In elderly women under 21 years of age, the development of reproductive organs and their physiological functions are not yet optimal, thereby increasing the risk of hypertelinosi during pregnancy. Many researchers have not yet understood the exact mechanism of why young adults can experience hypertelinosi during pregnancy. Researcher at RSUIP Dr. Mohammad Hoelsin in Palembang in 2006 found that hypertelinosi in pregnancy was more common in those aged 20 – 34 years. In women over 35 years of age, hypertelornia can occur during pregnancy due to increased blood pressure as ulcers progress as well as growth in the reproductive organs which interfere with blood circulation to the fetus, which increases the risk of hypertelornia during pregnancy, up to eclampsia. Ulmulr growth occurs due to the dysfunction of elndotell in the blood vessels, because it cannot balance the release of NO (NitriteOxidel) which has the ultimate function of vasodilatation due to excessive oxidative stress. The oxidative stresses referred to here are free radicals, namely ROS (Relative Oxygen Spelciels), pelroxide, sulpelroxide, hydroxyl free, etc. One of the ROS that has an effect on blood vessels is NADPH (Nicotinamide adelninel dinulclelotidelphosphate) sulpelroxide which is an inactive form of NO, which causes damage to blood cells so that they cannot be vasodilated. Therefore, it is why pregnant women between 21 years and 35 years are less likely to experience hyperthermia during pregnancy.

## CONCLUSIONS

Based on the research that has been carried out, it can be concluded that: There is a correlation between Ulcers and the occurrence of hypertension in pregnant women to indications of hypertension can be recognized early, especially pregnant women who are under 20 years old and over 35 years old and have a past history of hypertelinosi The advice from Pelnullis this research is basic research to look at the risk factors that cause hypertelrescence in pregnant women. Further research needs to be carried out in more depth regarding the risk factors that cause hypertelornia in pregnant women.

## REFERENCES

1. Basri H, Akbar R, Dwinata I, et al. *Faktor Yang Berhubungan Dengan Hipertensi Pada Ibu Hamil Di Kota Makassar*. <https://jurnal.umj.ac.id/index.php/JKK>
2. Setiadhi Y, Kawengian SES, Kandidat NM, et al. *Analisis Faktor Yang Berhubungan Dengan Kejadian Hipertensi Pada Kehamilan Di Kota Manado*. Vol 4.; 2016.
3. Hans I, Dwi Ariwibowo D. *Gambaran Pengaruh Hipertensi Pada Kehamilan Terhadap Ibu Dan Janin Serta Faktor-Faktor Yang Memengaruhinya Di RSUD Ciawi*. Vol 3.; 2020.
4. Nelawati Radjamuda1 AM 2 ., Faktor-Faktor Risiko Yang Berhubungan Dengan Kejadian Hipertensi Pada Ibu Hamil Di Poli Klinik Obs-Gin Rumah Sakit Jiwa Prof. Dr. V. L. Ratumbusang Kota Manado. *FaktorFaktor Risiko Yang Berhubungan Dengan Kejadian Hipertensi Pada Ibu Hamil Di Poli Klinik Obs-*

- Gin Rumah Sakit Jiwa Prof Dr V L Ratumbusang Kota Manado*. Published online 2017.
5. Sukfitrianty AAMHRL. Faktor Risiko Hipertensi Pada Ibu Hamil Di Rumah Sakit Hikmah Kota Makassar. *Faktor Risiko Hipertensi Pada Ibu Hamil Di Rumah Sakit Hikmah Kota Makassar*. Published online 2016.
  6. Fahira Nur A, Arifuddin A. *FAKTOR RISIKO KEJADIAN PREEKLAMPSIA PADA IBU HAMIL DI RSUD ANUTAPURA KOTA PALU*. Vol 3.; 2017.
  7. Basri H, Akbar R, Dwinata I. Faktor yang Berhubungan dengan Hipertensi pada Ibu Hamil di Kota Makassar. *J Kedokt dan Kesehat*. 2018;14(2):21.
  8. Thomas E, Yang J, Xu J, Lima F V., Stergiopoulos K. Pulmonary hypertension and pregnancy outcomes: Insights from the national inpatient sample. *J Am Heart Assoc*. 2017;6(10):1–12.
  9. Susiani, Priajaya S, Sirait A. Analisis Faktor-faktor yang Berhubungan dengan Risiko Kejadian Hipertensi pada Usia Dewasa Muda di Puskesmas Batang Beruh Kecamatan Sidikalang Kabupaten Dairi Tahun 2019. *J Ilm Simantek*. 2019;3(3):10–27.
  10. Andika A, Kurniawan H, Dewajanti AM. Faktor-Faktor yang Berhubungan dengan Hipertensi dalam Kehamilan di Puskesmas Kecamatan Kebon Jeruk Agustus 2016. *Artik Penelit*. 2016;1(1):1–26.
  11. Hinkosa L. Risk factors associated with hypertensive disorders in pregnancy in Nekemte referral Hospital, from July 2015 to June 2017, Ethiopia: case control study." *hypertensive disorders in pregnancy in Nekemte referral Hospital*. *BMC Pregnancy Childbirth*. 2017;9(July 2015):1–9.
  12. Nurhasanah DN. Faktor-faktor yang Berhubungan dengan Kejadian Preeklamsia pada Ibu Hamil di RSUD Panembahan Senopati Bantul Tahun 2016. *Naskah Publikasi*. Universitas 'Aisyiyah Yogyakarta; 2017.
  13. Naibaho F. Faktor-faktor yang Berhubungan dengan Kejadian Hipertensi pada Ibu Hamil di Puskesmas Nunpene Kabupaten Timor Tengah Utara Tahun 2018. *Intelektiva J Ekon Sos Hum*. 2021;2(12):20–5.
  14. Sundari L, Bangsawan M. Faktor-faktor yang Berhubungan dengan Kejadian Hipertensi. *J Keperawatan*. 2015;XI(2):216–23.
  15. Rambe ML. Faktor-faktor yang Mempengaruhi Hipertensi pada Kehamilan di Wilayah Kerja Puskesmas Pancur Batu Kecamatan Pancur Batu Kabupaten Deli Serdang Tahun 2017. *J Ilm Maksitek [Internet]*. 2018;3(4):42–9. Available from: <https://makarioz.sciencemakarioz.org/index.php/JIM/article/view/83/80>
  16. Abdurakhman RN. Faktor-faktor yang Berhubungan dengan Terjadinya Hipertensi dalam Kehamilan. *J Kesehat*. 2020;8(1):927–34.
  17. Lail NH. Faktor-faktor yang Berhubungan dengan Hipertensi dalam Kehamilan di Puskesmas Sukaraya Kecamatan Karang Bahagia Kabupaten Bekasi Tahun 2015. *J Ilmu dan Budaya*. 2019;41(62):7263–80.
  18. Sinambela M, Sari NM. Faktor-faktor yang Mempengaruhi Hipertensi pada Kehamilan Kecamatan Pancur Batu Kabupaten Deli Serdang dari Bulan Januari sampai Desember Tahun 2018. *J Keperawatan Fisioter*. 2018;1(1):12–9.

19. Purwaningtyas RY, Haswita. Faktorfaktor yang Berhubungan dengan Hipertensi pada Kehamilan di Wilayah Kerja Puskesmas Genteng Kulon. *J Ilm Kesehat Rustida*. 2020;07(02):149–54.
20. Radjamuda N, Montolalu A. Faktorfaktor Risiko yang Berhubungan dengan Kejadian Hipertensi pada Ibu Hamil di Poli Klinik Obs-Gin Rumah Sakit Jiwa Prof. Dr. V. L. Ratumbusang Kota Manado. *ilmiah Bidan*. 2014;2(1):33–40.
21. Honigberg MC, Zekavat SM, Aragam K, Klarin D, Bhatt DL, Scott NS, et al. Long-Term Cardiovascular Risk in Women With Hypertension During Pregnancy. *J Am Coll Cardiol*. 2019;74(22):2743–54.
22. Butalia S, Audibert F, Côté AM, Firoz T, Logan AG, Magee LA, et al. Hypertension Canada's 2018 Guidelines for the Management of Hypertension in Pregnancy. *Can J Cardiol* [Internet]. 2018;34(5):526–31. Available from: <https://doi.org/10.1016/j.cjca.2018.02.021>
23. Sastri N. Faktor–faktor yang Berhubungan dengan Hipertensi dalam Kehamilan pada Ibu Hamil di PMB Dewi Anggraini. *Masker Med*. 2021;9(2):521–30.