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Literature Review: The Relationship Of Dietary Patterns With The Incident Of Hypertension In Pregnant Women

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ABSTRACT

Background:Hypertension in pregnancy is one of the causes of morbidity and death throughout the world for both mother and fetus. Hypertension in pregnancy is defined as the presence of blood pressure of 140 mmHg or more after 20 weeks of pregnancy in women who were previously normotensive, or an increase in systolic pressure of 30 mmHg and diastolic pressure of 15 mmHg above normal values. During pregnancy or breastfeeding, mothers must pay attention to the food they consume. Nutritious food is food that contains energy substances, building substances and substances that meet nutritional needs. This nutritious food meets the needs of the fetus and increases breast milk production.Objective:This literature review aims to determine the relationship between diet and the incidence of hypertension in pregnant women. Method: This research uses the Literature Review method with a Narrative Review design. Scientific articles or journals were obtained from PubMed, Garuda Portal and Google Scholar with specified keywords and inclusion and exclusion criteria. Results:Of the 16 articles obtained, each article was described and criticized, and then research results were obtained which had the same results, namely that there was a relationship between diet and the incidence of hypertension in pregnant women. Conclusion: There is a relationship between diet and the incidence of hypertension in pregnant women.

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INTRODUCTION

Maternal mortality and morbidity remain serious health problems in developing countries. According to the 2020 World Health Organization (WHO) report, the Maternal Mortality Rate (MMR) reached a very high level. About 287,000 women died during pregnancy and after giving birth that year. Globally, in 2020, the number of AKI cases reached 223 per 100,000 live births with low-income countries having higher rates of AKI compared to high-income countries(World Health Organization, 2020). In 2023, the average MMR in all regions of Indonesia will still show a figure of above 100 deaths per 100,000 live births and the average IMR above 15 deaths per 1000 live births (Central Statistics Agency, 2024).

According to WHO data, hypertension in pregnancy is one of the causes of morbidity and death throughout the world for both mother and fetus. The causes of high AKI in the world are due to bleeding (25%), sepsis (15%), complications of unsafe abortion (13%), hypertension in pregnancy (12%), obstructed labor (8%), and other causes (7%) (Sihombing et al., 2021).

The Maternal Mortality Rate (MMR) in Indonesia is still one of the highest in Southeast Asian countries. The three main causes of maternal death in Indonesia in 2020 are bleeding with 1,330 cases, hypertension in pregnancy with 1,110 cases, and circulatory system disorders with 230 cases (Fakhri et al., 2023). In Indonesia, almost 30% of maternal deaths are caused by hypertension in pregnancy and it is ranked the second highest cause of maternal death after bleeding. In this case, severe preeclampsia is the biggest cause in the group of hypertension in pregnancy which causes complications and even causes maternal death (Nurfatimah et al., 2020).

Hypertension in pregnancy is defined as the presence of blood pressure of 140 mmHg or more after 20 weeks of pregnancy in women who were previously normotensive, or an increase in systolic pressure of 30 mmHg and diastolic pressure of 15 mmHg above normal values. Hypertension in pregnancy can cause morbidity/pain in the mother (including eclamptic seizures, brain hemorrhage, acute kidney failure, and blood clots in the blood vessels), as well as morbidity in the fetus (including stunted fetal growth in the womb, fetal death in the womb, and premature birth) (Ashari et al., 2024).

Many factors can cause hypertension in pregnancy, including lifestyle, one indicator of which is diet, physical activity and stress levels. Other risk factors for hypertension include age, gender, family history, and genetics (factors that cannot be changed/controlled) (Mellinia, 2021). The incidence of hypertension in pregnancy is closely related to the mother's diet. A diet containing preservatives that is not suitable for a diet for pregnant women. Eating patterns are closely related to a person's frequency of eating and the type of food consumed. Adequate nutrition that meets the recommended adequacy is an effort to overcome and prevent increases in blood pressure in pregnant women (Juniartati & Marsita, 2021).

Pregnancy can change appetite and eating patterns (craving habits), where in general a pregnant woman's appetite will increase, this causes the diet to become unbalanced which can cause complications including hypertension in pregnant women. Apart from that, the type and amount of food eaten every day by pregnant women also influences the mother's diet (Juniartati & Marsita, 2021).

Pregnant women need food that is nutritionally complete, this is especially important at 20 weeks of gestation, at this time pregnant women should not consume nutrition that is high in sodium and low in protein because it can cause pregnancy disorders such as instant noodles (Baharsa et al., 2021). The aim of this literature review is to determine the relationship between diet and the incidence of hypertension in pregnant women.

METHOD

This type of research uses the Literature Review method with a Narrative Review design. Literature was obtained by reviewing scientific articles or journals downloaded from

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PubMed, Garuda Portal and Google Scholar. Articles are screened based on provisions, including articles published in 2017-2024, published articles can be downloaded in full text and have open access, and discuss the relationship between diet and the incidence of hypertension in pregnant women, keys to searching for articles include diet, hypertension in pregnant women.

RESULTS

Through the article review and selection process, researchers obtained 16 article manuscripts that met the inclusion and exclusion criteria, and were relevant to this research. The 16 articles used are Indonesian language articles. A summary of information about the author, year of publication of the article, research design, and research results from each article used in this literature review is attached in table 1.

Each article was described and criticized, and then research results were obtained which had the same results, namely the existence of a relationship between diet and the incidence of hypertension in pregnant women.

Table 1. Results of article review

No.	Writer's name	Article Title	Publication Year	Research design	Results
1.	Nelfi Sarlis	The Relationship between Dietary Patterns and the Risk of Hypertension in Pregnancy in Third Trimester Pregnant Women at the Rejo Sari Pekan Baru Community Health Center, 2017	2018	*Cross Sectional*	From the research results, it was found that the majority of respondents had a good diet, 58 people (60.4%) and were not at risk of experiencing pregnancy hypertension, 75 people (78.1%). Based on the results of the chi square test, there was a relationship between diet and hypertension at the Rejosari Pekanbaru Community Health Center in 2017 with a P value of 0.009 < 0.05.
2.	Nurul Amalina, Rahmi Sari Kasoema, Ainal Mardiah	Factors that influence the incidence of preeclampsia in pregnant women	2022	*Cross Sectional*	From the research results, it was found that the results of the Chi Square Test of dietary habits on the incidence of preeclampsia in pregnant women had a relationship with a p value of 0.003. The OR value in this study was 7.792, namely an Odd Ratio > 1 indicating that unhealthy

No.	Writer's name	Article Title	Publication Year	Research design	Results
					eating patterns are included in the risk factors for preeclampsia in pregnant women.
3.	Erlina, Siti Aisyah, Sri Handayani, Yunola Literature	The Relationship between Maternal Knowledge, Diet and Family History with the Incident of Hypertension in Pregnancy at the Buay Runjung Community Health Center	2023	*Cross Sectional*	From the research results, it was found that based on the results of the chi-square statistical test on the dietary variable, the p-value was 0.009 (≤ α = 0.05), meaning that there was a significant relationship between diet and the incidence of hypertension in pregnancy.
4.	Sri Mularsih, Dewi Elliana	Relationship between Pregnant Women's Diet and Pregnant Women's Blood Pressure in Semarang City	2018	*Cross Sectional*	From the research results, it was found that 28 respondents (82.4%) had good eating patterns, some of the respondents did not experience an increase in blood pressure, 29 respondents (85.3%) while 5 respondents experienced an increase in blood pressure (14.7%). %). Based on the results of the chi square test, it can be concluded that there is a significant relationship between the diet of pregnant women and the high blood pressure of pregnant women, p value 0.002 (p<0.05).
5.	Erni Juniartati, Elma Marsita	The Relationship between Dietary Patterns and the Incident of Hypertension in Pregnant Women in the Working Area of the	2021	*Cross Sectional*	From the research results, the results of univariate analysis showed that of the 32 pregnant women with hypertension, there were 9 respondents with a good diet (28.2%) while there were 23 people (71.8%) with a poor

No.	Writer's name	Article Title	Publication Year	Research design	Results
		Banyumas Regency Health Center			diet. The results of the Chi Square statistical test obtained a p value = 0.000 (>0.05), so it can be concluded that there is a significant relationship between diet and the incidence of hypertension in pregnant women.
6.	TM Rafsanjani, Yasir, Masyudi	Relationship between Diet, Age and Knowledge with the Incident of Hypertension in Pregnant Women in Aceh Besar District	2019	*Cross Sectional*	From the research results, it was found that there was a relationship between diet and hypertension in pregnant women (p value 0.007 < 0.05) with an OR of 3.429 at the Krueng Barona Jaya Community Health Center, Krueng Barona Jaya District, Aceh Besar Regency in 2017.
7.	Fifi Ishak	Factors that Influence the Incident of Hypertension in Pregnancy in the Working Area of Telaga Biru Health Center, Gorontalo Regency	2022	*Cross Sectional*	From the research results it was found thatThere were 34 respondents who suffered from hypertension. The results of statistical tests show that age (ρ=0.549), parity (ρ=0.223), diet (ρ=0.02). It can be concluded that there is a relationship between diet and the incidence of hypertension in pregnancy. Meanwhile, age and parity have no relationship with the incidence of hypertension in pregnancy in the Telaga Biru Health Center Working Area, Gorontalo Regency.
8.	Syukma Ramadhani Faizal Nur, Silfia Angela Norce Halu,	Analysis of Knowledge and Diet on the Incident of Hypertension in	2023	*Cross Sectional*	The results of data analysis show that there is an influence of knowledge on the incidence of hypertension in pregnant women and it is statistically

No.	Writer's name	Article Title	Publication Year	Research design	Results
	Maria Paula Marla Nahak, Prima Soultomi Akbar	Pregnant Women			significant(b=-0.51, 95% CI= 0.25 - 0.72, p=<0.001). There is an influence of diet on the incidence of hypertension in pregnant women and it is statistically significant (b=-0.54, CI 95%=0.42 – 0.70), p=<0.001). Knowledge and diet influence the incidence of hypertension in pregnant women.
9.	Santi Elia Sihombing, Theresina CB, Friska Sinaga	*Literature Review*The Relationship between Dietary Patterns and the Incident of Hypertension in Pregnant Women	2021	Literature Review	From the research results, it was found that there were results that were related to diet and the incidence of hypertension in pregnant women, as evidenced by p<0.05, which means that there was a relationship between diet and the incidence of hypertension in pregnant women.
10.	Anif Lailatul Fitriyah	The Relationship between Dietary Patterns and the Risk of Preeclampsia in Primiparous Pregnant Women in the 2nd and 3rd Trimesters at the Kedungkandang Community Health Center, Malang City	2018	*Cross Sectional*	The results of this study show that there is a relationship between diet and risk factors for preeclampsia through blood pressure measurements as evidenced by an increase in blood pressure (p value 0.000) in 2 and 3 trimester primiparous pregnant women in the Kedungkandang Health Center working area, Malang City.
11.	Swita Anggraini, Milka Anggraeni	The Relationship between Dietary Patterns, Sleep Quality, and ANC	2023	*Cross Sectional*	The results of the univariate analysis found that 12.5% of respondents had preeclampsia, 26.8% of

No.	Writer's name	Article Title	Publication Year	Research design	Results
		Compliance with Preeclampsia in the Working Area of the Toboali Health Center, South Bangka, 2022			respondents had poor diet, 53.6% of respondents had poor quality sleep, and 17.9% of respondents did not comply with ANC. The results of bivariate analysis found that there was a relationship between diet and preeclampsia (P = 0.012), there was a relationship between sleep quality and preeclampsia (P = 0.012), and there was a relationship between ANC adherence and preeclampsia (P = 0.000). It can be concluded that eating patterns, sleep quality, and ANC compliance are related to preeclampsia.
12.	Shella Almaida, Siska Dhewi, Eka Handayani	The Relationship between Diet, Parity and Maternal Attitudes with the Incidence of Preeclampsia at Kuala Pembuang Regional Hospital, Seruyan Regency in 2021	2021	*Cross Sectional*	From the research results it was found that from statistical tests using the chi square test there was a relationship between diet and the incidence of preeclampsia (p = 0.000), there was no relationship between parity and the incidence of preeclampsia (p = 0.369), there was a relationship between maternal attitudes and the incidence of preeclampsia (p = 0.000). .
13.	Wilma Mellinia	Factors Correlated with Healthy Lifestyles and the Occurrence of Hypertension in Pregnant	2021	*Case Control*	From the research results, it was found that there was a significant relationship between diet, physical activity, stress levels and the incidence of hypertension in pregnant women. The results of the

No.	Writer's name	Article Title	Publication Year	Research design	Results
		Women at the Sungai Tutung Community Health Center, Kerinci Regency			statistical test on dietary patterns obtained a value (p-value= 0.000) with a value of (OR (Odd ratio)= 12.37 (95%CI=3.663-41.803). The results of the statistical test on physical activity obtained a P-value of 0.032 with an OR value = 3.068 (95% CI 1.131-8.325) and the results of the stress level statistical test obtained a P-value of 0.000 with an OR value = 11.40 (95% CI 3.766-34.506). incidence of hypertension in pregnant women.
14.	Destri Wulandari, Merisa Riski, Putu Lusita Nati Indriani	The Relationship between Obesity, Diet and Coverage of Antenatal Care Visits with the Incidence of Preeclampsia in Third Trimester Pregnant Women	2022	*Cross Sectional*	From the research results, it was found that there was a significant relationship between obesity (Pvalue = 0.003), eating patterns (Pvalue = 0.009) and preechalmsia. And, there is no significant association between ANC visit coverage and preeclampsia PV value = 1,000. It can be concluded that obesity and diet are related to the incidence of preeclampsia, while the coverage of ANC visits and the incidence of preeclampsia are not significantly related.
15.	Tia Sindi Sulistiawati	Factors Associated with the Incident of Hypertension in Pregnant Women in West Java	2022	*Case Control*	The results of the study show that there is a relationship between consumption of salty foods (p=0.008), consumption of fatty foods (p=0.021), and history of

No.	Writer's name	Article Title	Publication Year	Research design	Results
		Province			hypertension (0.001) with the incidence of hypertension in pregnant women, and there is no relationship between consumption of fruit and vegetables (p= 0.282), smoking habits (p=1.000) and parity (0.276) with the incidence of hypertension in pregnant women.
16.	Hasan Basri, Rismayanti Akbar, Indra Dwinata	Factors Associated with Hypertension in Pregnant Women in Makassar City	2018	*Cross Sectional*	The research results show that the fast food consumption variable shows that there is a relationship between fast food consumption and the incidence of hypertension in pregnant women with a value of p = 0.000. The number of pregnant women who experience hypertension by frequently consuming fast food (53.6%) is greater than those who do not frequently consume fast food (5.5%).

Discussion

Dietary habit

Diet is a variety of information that provides an overview of the type and amount of food eaten every day by a person or group of people to meet daily nutritional needs. The amount and amount of food one person eats varies from person to person, depending on gender, physical activity and a person's condition(Fitriyah, 2018).

Fitriyah (2018) said that sDuring pregnancy or breastfeeding, mothers must pay attention to the food they consume. Nutritious food is food that contains energy substances, building substances, and substances that meet nutritional needs. This nutritious food meets the needs of the fetus and increases breast milk production.

During pregnancy, a pregnant woman needs to consume more food than before pregnancy, namely an additional 150 Kcal a day in the first trimester, and 350 Kcal a day in the II and III trimesters, and appropriate dietary patterns are also needed, as well as a balanced

macronutrient intake (Nurmadilla et al., 2022).

Fitriyah (2018) also said that pA good diet for pregnant women must provide sources of carbohydrates, protein and fat as well as vitamins and minerals. To replace rice, you can use corn, sweet potatoes and bread. To replace animal protein, you can use tempeh and tofu.

To get a better effect from the diet of pregnant women, it is necessary to pay attention to the principles of pregnant women, namely greater quantity, better quality, apart from that the menu composition must also be balanced. For smooth digestion, it is recommended to avoid foods with lots of spices, too hot/cold and not to consume alcohol. It is also recommended to eat lots of green vegetables(Fitriyah, 2018).

Hypertension in Pregnant Women

Hypertension in pregnancy is hypertension that occurs when hypertension is first detected in a mother who is known to be normotensive (having normal blood pressure) after 20 weeks of pregnancy without significant proteinuria or other characteristics of preeclampsia. Hypertension is diagnosed when after resting, the mother's blood pressure rises above 140/90 mmHg on at least two occasions within a period of no more than one week. Hypertension in pregnancy occurs when blood pressure reaches 140/90 mmHg or more during pregnancy(Maimunah, 2020).

Several factors that can cause hypertension in pregnant women include the age of the pregnant woman, history of hypertension, parity, physical activity, exposure to cigarette smoke, consumption of salty foods, consumption of fruit vegetables and junk food. The high incidence of hypertension is due to unhealthy lifestyles such as lack of physical activity and consuming foods high in fat (Ashari et al., 2024).

The cause of hypertension in pregnancy is not clearly known. Many theories have been put forward about the occurrence of hypertension in pregnancy, but none of these theories is considered absolutely correct. Several research results show that nutritional deficiencies play a role in the occurrence of hypertension in pregnancy (Sari et al., 2022).

Sari et al. (2022), said that the nutritional deficiency theory/diet theory is one theory regarding the occurrence of hypertension in pregnancy. Low calcium intake in pregnant women results in an increase in parathyroid hormone (PTH) which will cause intracellular calcium to increase through the permeability of cell membranes to calcium. This causes calcium from the mitochondria to be released into the cytosol. Increased intracellular calcium levels cause vascular smooth muscle to be easily stimulated to vasoconstriction which results in increased blood pressure. Several studies assume that calcium deficiency in the diet of pregnant women causes the risk of preeclampsia/eclampsia. Calcium requirements increase during pregnancy because it is used to replace the mother's calcium reserves for the formation of new tissue in the fetus.

The Relationship between Dietary Patterns and the Incident of Hypertension in Pregnant Women

The incidence of hypertension in pregnancy is closely related to the mother's diet. Eating patterns are closely related to a person's frequency of eating and the type of food consumed. Adequate nutrition that meets the recommended adequacy is an effort to overcome and prevent increases in blood pressure in pregnant women (Juniartati & Marsita, 2021).

Pregnancy can change appetite and eating patterns (craving habits), where in general a pregnant woman's appetite will increase, this causes the diet to become unbalanced which can cause complications including hypertension in pregnant women. Apart from that, the type and amount of food eaten every day by pregnant women also influences the mother's diet (Isaac, 2022).

Diets in pregnant women that are low in potassium and magnesium are one of the factors that trigger hypertension. Meanwhile, fresh fruit and vegetables are the best sources of potassium and magnesium. A dietary approach to stop hypertension through The Dietary Approach to Stop Hypertension (DASH) is recommended to reduce blood pressure in pregnant women with hypertension. The diet and dietary adjustments made by pregnant women with hypertension greatly influence the mother's cardiometabolism. Pregnant women who consume high sugar, high fat and contain excess salt increase the risk of hypertension which will harm the pregnant mother and the fetus she is carrying (Juniartati & Marsita, 2021).

The habit of eating fatty and salty foods is often associated with blood pressure. The influence of a diet with the habit of eating fatty foods is often associated with high blood pressure because excessive fat consumption can trigger atherosclerosis, where the impact after atherosclerosis occurs causes thickening of the artery walls so that it can increase the workload of the heart to become stronger and ultimately can make blood pressure rise. tall. Meanwhile, consuming excess salt can increase fluid accumulation in the blood (diuretic) which causes blood circulation to be disrupted so that the heart will work stronger and ultimately a person's blood pressure will be high (Sihombing et al., 2021).

CONCLUSIONS

Based on the results above, it was concluded that there is a relationship between diet and the incidence of hypertension in pregnant women. Suggestions for researchers require further research on the type of food, frequency of eating, and the amount of food consumed which causes hypertension in pregnant women.

REFERENCES

1. World Health Organization. (2020). Maternal mortality Evidence brief. 1, 1–4.
2. Badan Pusat Statistik. 2024. Cerita Data Statistik Untuk Indonesia Edisi 2024.01. Jakarta: Badan Pusat Statistik
3. Sihombing, S. E., Theresina, C. B., & Sinaga, F. (2021). Literature Review Hubungan Pola Makan Terhadap Kejadian Hipertensi Pada Ibu Hamil. *Jurnal Kesehatan*, *9*(1), 73-79.
4. Fakhri, M., Mappaware, N. A., Wahab, M. I., Dewi, A. S., & Kadir, A. (2023). Faktor Determinan Pada Penderita Preeklampsia di RSIA Sitti Khadijah 1 Makassar tahun 2021. *Fakumi Medical Journal: Jurnal Mahasiswa Kedokteran*, *3*(8), 581-592.
5. Nurfatimah, N., Mohamad, M. S., Entoh, C., & Ramadhan, K. (2020). Gambaran Faktor Risiko Kejadian Hipertensi dalam Kehamilan pada Ibu Hamil Trimester III: Overview of Risk Factors for Hypertension in Pregnancy among Third-Trimester Pregnant Women. *Poltekita: Jurnal Ilmu Kesehatan*, *14*(1), 68-75.

6. Ashari, E. F., Mahardika, P., Primasari, Y., Noviasari, D., & Herniyatun, H. (2024). Faktor-faktor yang Berhubungan dengan Kejadian Hipertensi pada Ibu Hamil. *Ensiklopedia of Journal*, *6*(3), 82-88.
7. Mellinia, W. (2021). Faktor Yang Berhubungan Dengan Pola Hidup Sehat Dengan Kejadian Hipertensi Pada Ibu Hamil Dipuskesmas Sugai Tutung Kab. Kerinci (Doctoral dissertation, ilmu kesehatan masyarakat).
8. Juniartati, E., & Marsita, E. (2021). Hubungan Pola Makan dengan Kejadian Hipertensi pada Ibu Hamil di Wilayah Kerja pada Ibu Hamil di Wilayah Kerja Puskesmas Kabupaten Banyumas. *Jurnal Kebidanan Khatulistiwa*, *7*(1), 46-49.
9. Baharsa, R., Hamsah, M., Arsal, A. S. F., Mappaware, N. A., Karsa, N. S., Irianta, T., & Rakhmah, N. (2021). Hubungan Kejadian Preeklampsia pada Ibu Hamil dengan Mengkonsumsi Mie Instan. *Fakumi Medical Journal: Jurnal Mahasiswa Kedokteran*, *1*(1), 22-28.
10. Sarlis, N. (2018). Hubungan Pola Makan dengan Risiko Hipertensi dalam Kehamilan pada Ibu Hamil Trimester III di Puskesmas Rejosari Pekanbaru Tahun 2017. *Ensiklopedia of Journal*, *1*(1), 107-111.
11. Amalina, N., Kasoema, R. S., & Mardiah, A. (2022). Faktor yang Mempengaruhi Kejadian Preeklampsia pada Ibu Hamil. *Voice Of Midwifery*, *12*(1), 8-21.
12. Erlina, E., Aisyah, S., Handayani, S., & Yunola, S. (2023). Hubungan Pengetahuan Ibu, Pola Makan dan Riwayat Keluarga dengan Kejadian Hipertensi pada Kehamilan di Puskesmas Buay Runjung. *Jurnal Ilmu Kesehatan MAKIA*, *13*(2), 82-90.
13. Mularsih, S., & Elliana, D. (2018). Hubungan Pola Makan Ibu Hamil dengan Tekanan Darah Ibu Hamil Di Kota Semarang. *Jurnal Ilmiah Maternal*, *2*(3).
14. Rafsanjani, T. M., Yasir, Y., & Masyudi, M. (2019). Hubungan Pola Makan, Umur dan Pengetahuan dengan Kejadian Hipertensi pada Ibu Hamil di Wilayah Kerja Puskesmas Krueng Barona Jaya Kabupaten Aceh Besar. *Journal of public health research and community health Development*, *3*(1), 63-70.
15. Ishak, F. (2022). Faktor-Faktor yang Mempengaruhi Kejadian Hipertensi Dalam Kehamilan di Wilayah Kerja Puskesmas Telaga Biru Kabupaten Gorontalo. *Zaitun (Jurnal Ilmu Kesehatan)*, *10*(2).
16. Nur, S. R. F., Halu, S. A. N., Nahak, M. P. M., & Akbar, P. S. (2023). Analisis Pengetahuan dan Pola Makan Terhadap Kejadian Hipertensi pada Ibu Hamil: Analysis of Knowledge and Eating Patterns on Incident of Hypertension in Pregnant Women. *ASSYIFA: Jurnal Ilmu Kesehatan*, *1*(1), 37-42.
17. Fitriyah, A. L. (2018). Hubungan Pola Makan dengan Risiko Preeklampsia pada Ibu Hamil Primipara Trimester 2 dan 3 di Puskesmas Kedungkandang Kota Malang (Doctoral dissertation, Universitas Brawijaya).
18. Anggraini, S., & Sugesti, R. (2023). Hubungan Pola Makan, Kualitas Tidur, dan Kepatuhan ANC dengan Preeklampsia di Wilayah Kerja Puskesmas Toboali Bangka Selatan Tahun 2022. *SENTRI: Jurnal Riset Ilmiah*, *2*(6), 1908-1916.

19. Almaida, S. (2021). Hubungan Pola Makan, Paritas, dan Sikap Ibu dengan Kejadian Preeklampsia di RSUD Kuala Pembuang Kabupaten Seruyan Tahun 2021 (Doctoral dissertation, Universitas Islam Kalimantan MAB).
20. Wulandari, D., Riski, M., & Indriani, P. L. N. (2022). Hubungan Obesitas, Pola Makan dan Cakupan Kunjungan Antenatal Care Dengan Kejadian Preeklampsia Pada Ibu Hamil Trimester III. *Jurnal Kebidanan Indonesia*, *13*(1).
21. Sulistiawati, T. S. (2022). Faktor-Faktor Risiko yang Berhubungan dengan Kejadian Hipertensi Pada Ibu Hamil Di Provinsi Jawa Barat *(Analisis Data Riset Kesehatan Dasar Tahun 2018)* (Doctoral dissertation, Universitas Siliwangi).
22. Basri, H., Akbar, R., & Dwinata, I. (2018). Faktor yang Berhubungan dengan Hipertensi pada Ibu Hamil di Kota Makassar. *Jurnal Kedokteran Dan Kesehatan*, *14*(2), 21-30.
23. Nurmadilla, N., Pramono, S. D., & Ananda, F. (2022). Hubungan Asupan Karbohidrat Ibu Hamil Trimester III dengan BB Lahir Bayi RSIA Kota Makassar. *Fakumi Medical Journal: Jurnal Mahasiswa Kedokteran*, *2*(7), 510-517.
24. Maimunah, A. (2020). Hubungan Kecukupan Asupan Kalsium dengan Kejadian Hipertensi dalam Kehamilan Di Puskesmas Kasihan 1 Bantul Tahun 2020 (Doctoral dissertation, Poltekkes Kemenkes Yogyakarta).
25. Sari, I., Irmawati, I., & Nabila, N. (2022). Hubungan Asupan Kalsium dengan Hipertensi dalam Kehamilan di Puskesmas Ponre Kabupaten Bulukumba Tahun 2020. *Nuhela Journal of Injury*, *1*(2), 20-28.