

Determinants of hypertension incidents in productive age women in the working area of The Muara Panas Public Health Center, Solok Regency In 2025

Nita Tri Putri^{1*}, Vitria Komala Sari¹, Harmatati²

¹ Midwifery Study Programe, Fort De Kock University, Indonesia

² Muara Panas Public Health Center, Solok Regency, Indonesia

*Email: nitatriputri@fdk.ac.id

Abstract

The 2023 Indonesian Health Survey, the prevalence of hypertension based on measurement results in the population aged ≥ 18 years in Indonesia was 30.8%. The number of hypertension sufferers from January to June 2024 at the Muara Panas Community Health Center was 619 people consisting of 409 people (66%) women and 211 people (34%) men. The purpose of the study was to determine the determinants of the incidence of hypertension in productive-age women in the Muara Panas Community Health Center Working Area, Solok Regency in 2024. This study was descriptive with a case control. The population was all productive-age women (30 to 49 years) who lived in the Muara Panas Community Health Center working area. The study sample consisted of 78 people with hypertension with a control group of 78 people. Data collection was conducted using questionnaires through interviews. The results of the study found that the highest hypertension group included: smoking behavior among respondents (66.7%), with a family history of hypertension (71.8%), insufficient physical activity patterns (62.8%), a daily fatty diet (84.6%) and daily junk food (51.3%). Moderate stress factors (71.8%). It is hoped that there will be a policy for mapping early detection programs, routine health checks and counseling digitally 3 months before for prospective brides and grooms to give birth to a healthy generation. This service can also be used to obtain a Marriage Eligibility Certificate which is a requirement for marriage registration at the Office of Religious Affairs or the Civil Registry Office.

Keywords: determinants of hypertension in productive age groups

1. Introduction

Hypertension is one of the non-communicable diseases (NCDs) whose number of cases continues to increase every year, despite numerous health promotion and prevention efforts that have been implemented and developed in line with advances in science and technology. Hypertension or high blood pressure is a condition where systolic blood pressure is ≥ 140 mmHg and/or diastolic blood pressure is ≥ 90 mmHg. Hypertension is often referred to as The Silent Killer because its onset is often asymptomatic (Sudargo, 2021).

Hypertension is generally found in older people, but it is also affecting people of reproductive age, specifically women of childbearing age. Women of childbearing age are those who are still in their reproductive years (from the onset of menstruation until the end of menstruation), namely women aged 15–49 who are single, married, or widowed, and who have the potential to have children (Pertiwi, 2023). The number of people suffering from hypertension in the world is increasing every year, in 2025 it is estimated that around 1.5 billion people will suffer from hypertension, and it is estimated that every year 9.4 million people will die from suffering from hypertension and its complications (Ministry of Health, 2019). The World Health Organization (WHO) estimated the global prevalence of hypertension in 2019 at 22% of the total world population (Ministry of Health, 2019).

Based on data from the Solok Regency Health Office, the prevalence of hypertension in 2023 in the population aged >15 years, which is 22.13%, is still below the provincial figure, but the Muara Panas Community Health Center is ranked first out of 19 Community Health Centers in Solok Regency, with a prevalence of hypertension in the age group >15 years of 39.96%, far from the prevalence target set by the Solok Regency Health Office, which is 31.8%. And more than half or 1,606 people (52.8%) are women.

The number of hypertension sufferers from January to June 2024 at the Muara Panas Community Health Center was 619 people consisting of 409 people (66%) women and 211 people (34%) men. Based on age groups consisting of 15-29 years 3 people (0.73%), 30-49 years 78 people (19.07%), 50-59 years 100 people (24.4%) and >60 years 228 people (55.7%). Based on the hypertension grade

category, it consists of grade I as many as 372 people (60%), grade II as many as 190 people (31%) and grade III as many as 57 people (9%) (Muara Panas Community Health Center, 2024).

From the results of a preliminary survey conducted by researchers on August 5, 2024, on 10 respondents aged 30-49 years, 8 people (80%) of respondents were in the hypertension category, 6 people (60%) of respondents were in the obesity BMI category, 9 people (90%) of respondents were in central obesity, 7 people (70%) of respondents had a habit of eating salty foods, 9 people (90%) of respondents liked fatty foods, 1 person (10%) of respondents had a smoking habit and 7 people (70%) of respondents were exposed to cigarette smoke, 7 people (70%) of respondents were doing physical activity, 6 people (60%) of respondents stated that their rest patterns were lacking and 7 people (70%) of respondents had high stress.

Based on this background, the researcher conducted a study entitled "Determinants of Hypertension Incidence in Productive Age Women in the Muara Panas Community Health Center Work Area, Solok Regency in 2025."

2. Method

This study was a descriptive case-control study. The population consisted of 78 women of productive age (30 to 49 years old) with hypertension residing in the Muara Panas Community Health Center's work area. The control group consisted of 78 women of productive age (30-49 years old) who did not have hypertension. The study was conducted in October 2024.

The data analysis used is univariate analysis, namely analysis is only carried out per variable, using frequency distribution and tables which are interpreted to answer the research objectives.

3. Results and Discussion

3.1. Results

Table 1. Respondent characteristics

No	Work	Case		Control	
		n	%	n	%
1.	Housewife	56	71.8	55	70.5
2.	Civil Servant	3	3.8	14	17.9
3.	Farmer	12	15.4	6	7.7
5.	Selling Goods	1	1.3	1	1.3
5.	Private/Self-Employed	6	7.7	2	2.6
		78	100	78	100

Based on Table 1, it can be seen that of the 78 respondents in the case group, more than half (71.8%) of the respondents were unemployed, and in the control group, more than half (70.5%) of the respondents were unemployed (housewives). Only a small proportion were employed, both in the case and control groups.

Table 2. Frequency Distribution of Respondents Based on Smoking, Alcohol and Coffee Drinking Behavior in the Muara Panas Community Health Center Work Area in 2024

No	Smoking, Alcohol and Coffee Behavior	Case		Control	
		n	%	n	%
1.	At risk	52	66.7	11	14.1
2.	No Risk	26	33.3	67	85.9
		78	100	78	100

Based on table 2, it can be seen that of the 78 respondents, more than half (66.7%) of respondents had risky behavior in the case group and in the control group, only a small portion (14.1%) of respondents had risky behavior, which was very different from the hypertension group.

Table 3. Frequency Distribution of Respondents Based on Physical Activity in Productive Age Women in the Muara Panas Community Health Center Work Area in 2024

No	Physical activity in women of productive age	Case		Control	
		n	%	n	%
1.	Not enough	49	62.8	51	65.4
2.	Enough	29	37.2	27	34.6
		78	100	78	100

Based on Table 3, it can be seen that of the 78 respondents, more than half (62.8%) of the respondents in the case group did not have enough physical activity. This was slightly higher in the control group, where more than half (65.4%) of the respondents did not have enough physical activity. Only a small proportion (37.2%) of the respondents with hypertension had enough physical activity, and in the control group, only a small proportion (34.6%) of the respondents had enough physical activity.

Table 4. Frequency Distribution of Respondents Based on Dietary Patterns in Productive Age Women in the Muara Panas Community Health Center Work Area in 2024

No	Eating patterns in women of productive age	Case		Control	
		N	%	n	%
1.	Not Diverse	20	25.6	19	24.4
2.	Diverse	58	74.4	59	75.6
		78	100	78	100

Based on table 4, it can be seen that of the 78 respondents, more than half (74.4%) of respondents consumed a variety of foods in the case group, but there was still a small portion (25.6%) of respondents who consumed non-diverse foods, likewise in the control group, more than half (75.6%) of respondents had consumed a variety of foods, but there was still a small portion (24.4%) of respondents who consumed non-diverse foods.

Table 5. Frequency Distribution of Respondents Based on Food Frequency in Productive Age Women in the Muara Panas Community Health Center Work Area in 2024

No	Food frequency in women of productive age	Case		Control	
		n	%	n	%
1.	Fatty foods				
	a. Every day	66	84,6	65	83,3
	b. Not every day	12	15,4	13	16,7
		78	100	78	100
2.	Junk food				
	a. Every day	40	51,3	19	24,4
	b. Not every day	38	48,7	59	75,6
		78	100	78	100
3.	Salty food				
	a. Every day	19	24,4	14	17,9
	b. Not every day	59	75,6	64	82,1
		78	100	78	100

From table 5 above, it can be seen that of the 78 respondents, the majority (84.6%) of case respondents consumed fatty foods every day, as well as in the control group, the majority (83.3%)

consumed fatty foods. However, there was a difference in junk food consumption in the case group, some (51.3%) consumed junk food every day, while in the control group, only a small portion (24.4%) consumed junk food every day.

Table 6. Frequency Distribution of Respondents Based on Stress Levels in Productive Age Women in the Muara Panas Community Health Center Work Area in 2024

No	Stress levels in women of productive age	Case		Control	
		n	%	n	%
1.	Light	21	26.9	49	62,8
2.	Medium	56	71.8	29	37,2
3.	Heavy	1	1.3	0	0,0
		78	100	78	100

Based on table 6, it can be seen that out of 78 respondents, more than a part (71.8%) of respondents had moderate levels of stress, some (26.9%) experienced mild stress and it was found that there were (1.3%) respondents who experienced severe stress in the case group. Meanwhile, in the control group respondents, more than a portion (62.8%) of respondents had mild stress and (37.2%) of respondents experienced moderate stress.

3.2. Discussion

3.2.1. Family History

According to the researcher's assumption, more than half (71.8%) of respondents have a family history of hypertension in the case group in the Muara Panas Community Health Center work area, this is because there are no preventive efforts carried out by families who have a family history of hypertension, such as conducting regular blood pressure checks at the Community Health Center, so that the Community Health Center can carry out early detection of family members so that the treatment program or prevention program provided can be more focused on families who suffer from hypertension with a family history of hypertension.

3.2.2. Smoking, alcohol, and coffee consumption

These behaviors alone do not contribute to hypertension. While coffee may provide some benefits such as relieving fatigue, preventing drowsiness, relieving stress, and calming the mind, it can also trigger hypertension when combined with several other risk factors. These benefits can lead someone to continue drinking coffee, even though they are aware of its side effects.

3.2.3. Physical Activity

According to the researchers' assumptions, more than half (62.8%) of respondents in the case group were not physically active enough. This was because respondents did not exercise due to laziness. Of the 49 respondents who were physically inactive, the majority (77.6%) were housewives, with only a small proportion working outside the home. There was a perception that household chores were tantamount to exercise, leading many to consider exercise unimportant. A small proportion (28.6%) of respondents only exercised once or twice a week for 30-60 minutes, but this was not sufficient to meet their physical activity needs. Respondents also stated that they exercise whenever they have time.

3.2.4. Dietary patterns in women of reproductive age

According to researchers' assumptions, although more than half (74.4%) of respondents in the case group consumed a variety of foods, the type of food consumed will impact a person's health. As many as 54 people (93.1%) consumed oil or coconut milk daily. Consuming high-fat foods, such as those prepared with excessive oil or coconut milk, can lead to various health problems, such as coronary heart disease, heart attacks, and strokes. It can also cause digestive problems, including constipation and irritable bowel syndrome (IBS).

3.2.5. Stress Levels

According to the researchers' assumptions, of the 71.8% of respondents with moderate stress levels in the case group, more than half (63.2%) were housewives, followed by 12 farmers (21.1%), and the remainder were private employees, civil servants, traders, and self-employed. The study also showed that stress was triggered by respondents feeling that things were not going according to plan, feeling unsure of their ability to handle personal problems, and frequently becoming angry due to uncontrollable issues. If stress persists and persists for a long time, blood pressure will remain high, leading to hypertension. From the above research results, the researchers concluded that there is a relationship between stress and the incidence of hypertension.

4. Conclusion

- a) More than half (71.8%) of respondents had a family history of hypertension in the case group, but in the control group, only a small proportion (28.2%) had a family history of hypertension. Statistical tests showed an Odds Ratio (OR) of 0.154, meaning that those with a family history have a 0.154-fold chance of developing hypertension.
- b) More than half (66.7%) of respondents had risky behavior in the case group and only a small portion (14.1%) of respondents had risky behavior in the control group. The results of the statistical test obtained an Odd Ratio (OR) value of 12.182, meaning that risky behavior has a 12.182 times chance of developing hypertension.
- c) More than half (74.4%) of respondents consumed a variety of foods in the case group, as well as in the control group, more than half (75.6%) of respondents had consumed a variety of foods. The results of the statistical test showed that the Odd Ratio (OR) value was 1.071, meaning that an unvaried diet had a 1.071 times greater chance of developing hypertension.
- d) More than half (71.8%) of respondents had moderate stress levels in the case group. Meanwhile, in the control group, more than half (62.8%) of respondents had mild stress.

References

- Andika, M. (2023a). Kardiovaskuler "Hipertensi, Stroke, Anemia, Aritmia, Dislipidimia" (S. Ariny, Ed.; I). CV. Adanu Abimata.
- Andika, M. (2023b). Kardiovaskuler "Hipertensi, Stroke, Anemia, Aritmia, Dislipidimia.
- Aspiani Yuli, R. (2017). Buku Ajar Asuhan Keperawatan Klien Gangguan Kardiovaskular Aplikasi Nic & Noc (W. Praptiani, Ed.). Penerbit Buku Kedokteran EGC.
- Aulia Rahmi, S., Ratih, M., Latifahanun, E., Febriandi, S., & Islam Mulia Yogyakarta, U. (2024). GAYA HIDUP DAN TEKANAN DARAH PADA USIA PRODUKTIF DI KALURAHAN DEMANGREJO LIFESTYLE AND BLOOD PRESSURE IN PRODUCTIVE AGE IN DEMANGREJO DISTRICT. 1.
- Basit, M., Raudatul Jannah, F., Sari Mulia Banjarmasin, S., Moch Ansari Saleh Banjarmasin, R. H., & Penulis, K. (2019). HUBUNGAN LAMA KERJA DAN POLA ISTIRAHAT DENGAN DERAJAT HIPERTENSI DI POLI PENYAKIT DALAM RSUD ULIN BANJARMASIN. *Dinamika Kesehatan*, 7(1).
- Ersanti, N. A. (2023). Hubungan tingkat stres dengan tekanan darah pada lansia di posyandu lansia wilayah kerja Puskesmas Jenangan Kabupaten Ponorogo.
- Fandinata, S. S. (2020a). Management Terapi Pada Penyakit Degeneratif (N. Reny, Ed.; I). Graniti.
- Fandinata, S. S. (2020b). Manajemen Terapi Pada Penyakit Degeneratif (N. Reny (ed.)).
- Febriyenti, G. P. M. (2023). Gambaran faktor risiko penyebab hipertensi di wilayah kerja Puskesmas Buleleng I Kecamatan Buleleng Kabupaten Buleleng.
- Hintari, S., Ika Fibriana, A., Ilmu Kesehatan Masyarakat, J., Ilmu Keolahragaan, F., & Negeri Semarang, U. (2023). 208 HIGEIA 7 (2) (2023) HIGEIA JOURNAL OF PUBLIC HEALTH RESEARCH AND DEVELOPMENT Hipertensi pada Penduduk Usia Produktif (15-59 Tahun) di Wilayah Kerja Puskesmas Pageruyung Kabupaten Kendal. <https://doi.org/10.15294/higeia/v7i2/63472>
- Kurnia, A. (2020). Self Management Hipertensi (T. Lestari, Ed.). CV. Jakad Media Publishing.

- Manurung, N. (2018). KEPERAWATAN MEDIKAL BEDAH KONSEP MIND MAPPING DAN NANDA NIC NOC SOLUSI CERDAS LULUS UKOM BIDANG KEPERAWATAN (I). CV. Trans Info Media.
- Manurung, N. (2019). KEPERAWATAN MEDIKAL BEDAH KONSEP MIND MAPPING DAN NANDA NIC NOC SOLUSI CERDAS LULUS UKOM BIDANG KEPERAWATAN (I).
- Mardianto, Darwis, & Suhartatik. (2021). Hubungan Pola Makan Dengan Kejadian Hipertensi.
- Nurhasanah, A. (2019). FAKTOR-FAKTOR YANG BERPENGARUH TERHADAP HIPERTENSI PADA USIA PRODUKTIF DI WILAYAH KERJA PUSKESMAS SUMANDA KECAMATAN PUGUNG KABUPATEN TANGGAMUS 1 2.
- Nursalam. (2016). Metodologi Penelitian Ilmu Keperawatan Pendekatan Praktis. Penerbit Salemba Medika.
- Pertiwi, T. D., Agustina, N., Aquarista, M. F., Hadi, Z., Indah, M. F., Asrinawaty, A., & Chandra, C. (2023). Faktor-Faktor Yang Berhubungan Dengan Kejadian Hipertensi pada Wanita Usia Subur (15-49 Tahun) di Wilayah Kerja UPTD Puskesmas Martapura Timur Tahun 2023. *An-Nadaa Jurnal Kesehatan Masyarakat*, 10(2), 209. <https://doi.org/10.31602/ann.v10i2.13358>
- Pikir, B. (2015). Hipertensi Manajemen Kompresif (I). Airlangga University Press (AUP).
- Pikir.S Budi, M. A. A. S. (2019). Hipertensi Manajemen Komprehensif . Airlangga University Press (AUP).
- Puskesmas Muara Panas. (2024). Laporan PTM Puskesmas Muara Panas.
- Putri, D. H. (2021). Hubungan pola makan dengan status gizi mahasiswa Universitas Muhammadiyah Surabaya.
- Righo, A. (2014). TERAPI BEKAM TERBUKTI MAMPU MNGATASI HIPERTENSI (I). CV. Rasi Terbit.
- Rusdiana, I. H. (2019). Hubungan kualitas tidur dengan peningkatan tekanan darah pada pasien hipertensi di wilayah kerja Puskesmas Guntung Payung.
- Samsudrajat, A. S., & Putri Hersa, A. (2022). Faktor Determinan Kejadian Hipertensi Usia Produktif (15-59 Tahun) Diwilayah Kerja Puskesmas Sepauk Kabupaten Sintang Tahun 2022. *Jurnal Mahasiswa Dan Peneliti Kesehatan*, 9(2), 183–194. <https://doi.org/10.29406/jjum.v9i2>
- Sudargo, T. (2021). Asuhan Gizi Pada Lanjut Usia (T. Aristasari, Ed.). Gadjah Mada University Press.
- Syafira, D., & Febrianti, T. (2021). Faktor Determinan Kejadian Hipertensi Pada Usia Produktif. <http://jsemesta.iakmi.or.id/index.php/jm>
- Tjokroprawiro, A. (2015). Buku Ajar Ilmu Penyakit Dalam Fakultas Kedokteran Universitas Airlangga Rumah Sakit Pendidikan Dr. Soetomo Surabaya (D. Susanto, Ed.; 2nd ed.). Airlangga University Press (AUP).
- Widiyono, D. (2022). Aktivitas Fisik Untuk Mengatasi Hipertensi. Lembaga Chakra Brahmanda Lentera.
- Wijayati, M. D. (2023). Belajar Genetika dan Penyakit Tidak Menular (I). CV. Pajang Putra Wijaya