



The Relationship Between Maternal Age and Parity and the Incidence of Hypertension in the Third Trimester of Pregnancy at the Maja Community Health Center in 2026

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Abstract

Keywords

Gestational Hypertension;
Parity; Maternal Age

Hypertension in pregnancy remains a major global public health problem, contributing significantly to maternal and fetal morbidity and mortality. This condition is influenced by multiple risk factors, including maternal age and parity, which play an important role in determining pregnancy outcomes. The objective of this study was to analyze the relationship between maternal age and parity and the incidence of hypertension in third-trimester pregnancy at the Maja Community Health Center in 2026. This study used an observational analytic design with a cross-sectional approach. The population consisted of third-trimester pregnant women recorded at the Maja Community Health Center, with a total sampling technique. Data were collected from medical records and analyzed using univariate and bivariate analyses with the Chi-Square test and prevalence ratio (RP). The results showed that 10.7% of respondents experienced hypertension in pregnancy. There was a significant relationship between maternal age and hypertension ($p = 0.030$; $RP = 3.146$), indicating that women in high-risk age groups had a higher probability of developing hypertension. A significant relationship was also found between parity and hypertension ($p = 0.038$; $RP = 2.759$). In conclusion, both maternal age and parity are significant risk factors for hypertension in pregnancy. These findings highlight the importance of early detection and targeted maternal health interventions to reduce complications during pregnancy.

INTRODUCTION

According to the International Federation of Obstetrics and Gynecology, pregnancy is defined as the fertilization or union of a spermatozoon and an ovum, followed by nidation or implantation. Hypertension in pregnancy is one of the obstetric complications that remains the biggest challenge in maternal health because it contributes to significant mortality and morbidity in both mothers and babies (Darmayanti, Edi, Meitria, & Bakhriansyah, 2025). The World Health Organization (WHO) estimates that nearly 300,000 women lose their lives due to pregnancy or childbirth each year (World Health Organization, 2025). Hypertension in pregnancy is responsible for approximately 16% of maternal deaths globally, equivalent to approximately 42,000 deaths (World Health Organization, 2025).

Based on Indonesian Health Profile data, the maternal mortality rate (MMR) in 2023 reached 4,482 cases, caused by hypertension in pregnancy as many as 412 cases, obstetric hemorrhage as many as 360 cases and other obstetric complications as many as 204 cases. The maternal mortality rate (MMR) decreased in 2024 to 4,151 cases, non-obstetric complications

in pregnancy as many as 1,351 cases, followed by hypertension in pregnancy, childbirth and postpartum as many as 988 cases and obstetric hemorrhage as many as 955 cases. Although the MMR decreased, the number of cases of hypertension in pregnancy increased from 412 cases in 2023 to 988 cases in 2024.(Kementerian Kesehatan RI, 2024)

In 2023, the maternal mortality rate (MMR) reached 792 cases or 96.89 per 100,000 live births and maternal deaths due to hypertension in pregnancy in West Java were recorded at 194 cases (24.49%), still one of the biggest causes of maternal death (Dinas Kesehatan Jawa Barat, 2024). Meanwhile, the MMR in 2024 was 749 cases or 98.60 per 100,000 live births. Cases due to hypertension in pregnancy in West Java Province in 2024 showed an increase compared to the previous year, namely by 218 cases or around 29.11% (Dinas Kesehatan Jawa Barat, 2025).

Based on data on cases of hypertension in pregnancy in Majalengka Regency, the number of cases has fluctuated over the past three years. In 2023, there were 713 cases, then increased to 805 cases in 2024, and again to 1,101 cases in 2025. This number of cases is still relatively high and indicates that hypertension in pregnancy remains a health problem that requires serious attention. This compares favorably with the targets of health programs at the national and West Java provincial levels, which emphasize efforts to reduce risks and complications by increasing maternal health service coverage. Therefore, the persistently high number of cases in Majalengka Regency indicates that efforts to prevent, detect, and control hypertension in pregnancy are not yet optimal and need to be improved.(Dinas Kesehatan Majalengka, 2026)

Hypertension in pregnancy according to (Garovic et al., 2020; Poon et al., 2023; Bajpai et al., 2023; Malai Yappan et.al., 2025) will increase the risk of immediate complications and long-term maternal complications such as pulmonary edema, placental abruption, recurrent hypertension in pregnancy, cardiovascular disease, neurological disorders, kidney disease, metabolic disorders, and venous thromboembolism. Meanwhile, the risks to the fetus conceived in the future in pregnancies with hypertension according to (Li et al., 2021; Bajpai et al., 2023; Malaiyappan et.al., 2025) are low birth weight (LBW), fetal growth disorders / intrauterine growth retardation (IUGR), and decreased cognitive function (Darmayanti, Edi, Meitria, & Bakhriansyah, 2025).

Hypertension in pregnancy is a complication influenced by various risk factors. According to (World Health Organization, 2025), contributing factors include maternal age, parity, obesity, medical history, and multiple pregnancies. Maternal age <20 years or >35 years is known to be at higher risk due to immature physiological conditions or decreased function. Furthermore, parity also plays a role; primigravida and grandemultipara mothers are more susceptible to hypertension in pregnancy because their bodies have not yet optimally adapted to pregnancy. Therefore, age and parity are important factors that need to be considered in efforts to prevent and detect hypertension in pregnancy early.

Research conducted by (Haryanti, Maraya, Sulastri, & Hariyanti, 2025)shows a relationship between age and the incidence of hypertension in pregnant women, and parity is also associated with the incidence of hypertension in pregnant women. Meanwhile, research conducted by (Zolekhah, Barokah, & Kusumawardani, 2025)also found a relationship between parity and the incidence of hypertension in pregnant women. Research also found (Yurianti, Umar, Wardhani, & Kameliawati, 2020)a relationship between maternal age and the incidence

of hypertension in pregnant women, and there was a relationship between parity and the incidence of hypertension in pregnant women.

In Indonesia, maternal mortality remains a critical health indicator despite ongoing improvements in healthcare services. National data show that maternal deaths continue to be significantly influenced by pregnancy-related hypertension, alongside hemorrhage and other obstetric complications. The Indonesian Health Profile reports that cases of hypertension in pregnancy increased from 412 cases in 2023 to 988 cases in 2024, indicating a worsening trend despite a general decline in total maternal mortality. This increase reflects the need for more effective preventive and early detection strategies at the primary healthcare level.

At the provincial level, West Java also demonstrates a concerning pattern. Maternal mortality rates remain high, with hypertension in pregnancy consistently ranking as one of the leading causes of death. Data from the West Java Health Office show that cases of hypertension in pregnancy increased from 194 cases (24.49%) in 2023 to 218 cases (29.11%) in 2024. In Majalengka Regency specifically, cases have increased steadily over three consecutive years, from 713 cases in 2023, to 805 cases in 2024, and reaching 1,101 cases in 2025. This upward trend indicates that hypertension in pregnancy is still not optimally controlled at the local level.

Hypertension in pregnancy is strongly influenced by several risk factors, particularly maternal age and parity. Women aged below 20 years or above 35 years are more vulnerable due to physiological immaturity or age-related vascular decline. Similarly, parity plays a crucial role, where primigravida and grandemultipara conditions are associated with increased risk due to physiological adaptation processes and decreased reproductive system efficiency. These factors collectively contribute to impaired vascular regulation, increasing the likelihood of hypertensive disorders during pregnancy.

Previous studies have consistently demonstrated the relationship between maternal age, parity, and hypertension in pregnancy. Research by Yurianti et al. (2020) found a significant association between both variables and the incidence of hypertension in pregnant women. Similarly, Zolekhah et al. (2025) reported that parity and maternal age significantly influence hypertensive conditions during pregnancy. Additional studies by Haryanti et al. (2025) also support these findings, reinforcing that age and parity are consistently identified as significant risk factors across different populations and settings.

Despite the abundance of previous research, most studies have been conducted in different geographical contexts and healthcare settings, limiting their applicability to specific local populations. In the Maja Community Health Center area, there is still a lack of detailed epidemiological analysis examining the relationship between maternal age and parity with hypertension in pregnancy, particularly using prevalence ratio analysis. This gap indicates the need for localized evidence to better understand risk distribution in this specific population.

The urgency of this research lies in the increasing trend of hypertension cases in the Maja Community Health Center area, where cases rose significantly from 38 in 2023 to 80 in 2025. This continuous increase suggests that current preventive and screening measures may not yet be fully effective. Without targeted local evidence, health interventions may not adequately address the dominant risk factors contributing to the condition. Therefore, a focused study is necessary to support more precise maternal health strategies.

The novelty of this study lies in its focus on a specific primary healthcare setting combined with the use of prevalence ratio analysis to measure the strength of association

between maternal age, parity, and hypertension in pregnancy. The purpose of this study is to identify and analyze these relationships in order to provide evidence-based recommendations. The contribution of this research is expected to strengthen primary healthcare decision-making, particularly in maternal health program planning and risk-based antenatal care interventions.

The objective of this study is to determine the relationship between maternal age and parity with the incidence of hypertension in third-trimester pregnancy at the Maja Community Health Center in 2026. The expected benefit of this research is to provide scientific evidence for healthcare providers, particularly midwives, in improving early detection and prevention strategies. In addition, it is also beneficial for pregnant women to increase awareness of risk factors and promote better pregnancy planning to reduce complications associated with hypertension.

METHOD

This study is an observational analysis study, meaning the researcher did not provide intervention, but only observed the subjects. The research design used was *cross-sectional*, which is a research design that seeks a relationship between risk factors and effects that are measured only once. (Sastroasmoro & Ismael, 2016) This study aims to determine the relationship between maternal age and parity with the incidence of hypertension in pregnancy at the Maja Health Center in 2026. The target population in this study were third-trimester pregnant women in the Maja Health Center health service area. The accessible population in this study were pregnant women in their third trimester who were recorded in medical records or underwent examinations at the Maja Community Health Center during the period January-April 2026. The sample in this study was an accessible population that had met the inclusion and exclusion criteria. The sampling technique used was *total sampling*, namely the entire population was used as a research sample according to the predetermined criteria. The inclusion criteria were pregnant women in their third trimester who underwent examinations at the Maja Community Health Center during the period January-April 2026 and had complete data on age, parity, and blood pressure. Exclusion criteria included pregnant women in their first and second trimesters, pregnant women in their third trimester with incomplete data, a history of chronic hypertension before pregnancy, suffering from severe comorbidities (heart disease, diabetes, chronic kidney disease), gemelli pregnancy, and obesity ($BMI \geq 25$). These variables were excluded to minimize confounding factors in the relationship between age and parity with hypertension in pregnancy. The determination of the sample size used in this study was determined based on the results of previous related research, namely research (Yurianti, Umar, Wardhani, & Kameliawati, 2020) using the *Lemeshow formula*. P is determined to be the proportion of pregnant women who experience hypertension, namely 8.4%, a confidence level of 95%, and using a precision value of 0.05 so that the results obtained are a minimum sample size of 119 and will be added to the *dropout reserve* of 10% to 131 samples.

The research instrument used in this study was a Master Table of data collection checklist sheets compiled by the researcher based on secondary data from the pregnant women's register in Cluster 2 of the Outpatient Maternal Polyclinic and electronic medical records (E-Puskesmas). The research process began with a research permit application to the Majalengka Health Office, followed by a data collection permit application to the Puskesmas. The

researcher then selected the data according to the established inclusion and exclusion criteria. The data collected included maternal age, parity, hypertension status during pregnancy, and other supporting variables recorded in the register. The data were then recorded in the master table of the checklist sheet, followed by data completeness checks, editing, coding, and data entry into the *Statistical Package for the Social Sciences* (SPSS) program. The data were then analyzed univariately to determine the frequency distribution of each variable, and bivariate analysis using the Chi-Square test to determine the relationship between maternal age and parity with the incidence of hypertension during pregnancy. The researcher also calculated the prevalence ratio (RP) to determine the risk of each independent variable influencing the occurrence of hypertension during pregnancy.

RESULTS AND DISCUSSION

Univariate Analysis

1. Frequency Distribution of Maternal Age

Table 1. Frequency Distribution of Age of Pregnant Women in the Third Trimester at Maja Community Health Center

Characteristics	Number (n)	Percentage (%)
Age of Pregnant Mother		
<20 and >35 years	58	44.3
20-35 years	73	55.7
Total	131	100

Source : Research Results January-April 2026

Based on Table 1, the majority of respondents were at risk (<20 and >35 years), namely 58 mothers (44.3%), and those not at risk (20 – 35 years) were 73 mothers (55.7%).

2. Parity Frequency Distribution

Table 2. Parity Frequency Distribution of Pregnant Women in the Third Trimester at Maja Community Health Center

Characteristics	Number (n)	Percentage (%)
Parity		
0 and ≥ 4	28	21.4
1-3	103	78.6
Total	131	100

Source : Research Results January-April 2026

Based on Table 2, the majority of pregnant women were found to have parity at risk (0 and ≥ 4), namely 28 mothers (21.4%), and parity not at risk (1-3), namely 103 mothers (78.6%).

3. Frequency Distribution of Hypertension in Pregnancy

Table 3. Frequency Distribution of Hypertension Incidence in Pregnancy

Characteristics	Number (n)	Percentage (%)
Hypertension in Pregnancy		
Yes	14	10.7
No	117	89.3
Total	131	100

Source : Research Results January-April 2026

Based on the data in Table 3, it shows that of the 131 pregnant women in their third trimester who checked at the Maja Community Health Center, 14 (10.7%) pregnant women suffered from hypertension and 117 (89.3%) pregnant women did not suffer from hypertension.

Bivariate Analysis

The Relationship Between Maternal Age and the Incidence of Hypertension in Pregnancy

Table 4. The Relationship Between Maternal Age and the Incidence of Hypertension in Pregnancy at Maja Community Health Center in 2026

			Hypertension in Pregnancy		Amount
			Yes	No	
Age	<20 and >35 years	n	10	48	58
		%	17.2	82.8	100
	20-35 years	n	4	69	73
		%	5.5	94.5	100
Amount		n	14	117	131
		%	10.7	89.3	100
<i>p-value</i>				0.030	
RP				3,146	
95% Confidence Interval (CI)		Lower	1,040		
		Upper	9,520		

Research Results Source January-April 2026

Table 4 shows that of the 58 mothers aged <20 and >35 years, 10 of them experienced hypertension during pregnancy (17.2 %), while of the 73 mothers aged 20-35 years, only 4 of them experienced hypertension during pregnancy (5.5 %). The results of the *chi-square* analysis showed a *p-value* <0.05, namely 0.030 with a RP of 3.146. (95%CI=1.040-9.520) . This shows that there is a significant relationship between age and the incidence of hypertension in pregnancy . Mothers aged <20 and > 35 years have a prevalence of hypertension 3.146 times greater. compared to mothers aged 20-35 years. The prevalence ratio is accompanied by a Confidence Interval (CI) and the desired confidence level of 95%. The CI obtained is 95% (1,040-9,520), which means that the prevalence ratio in the target population with a 95% degree of accuracy ranges from 1,040-9,520 .

The Relationship Between Parity and the Incidence of Hypertension in Pregnancy

Table 5. The Relationship Between Parity and the Incidence of Hypertension in Pregnancy at Maja Community Health Center in 2026

			Hypertension in Pregnancy		Amount
			Yes	No	
Parity	0 and ≥4	n	6	22	28
		%	21.4	78.6	100
	1-3	n	8	95	103
		%	7.8	92.2	100
Amount		n	14	117	131
		%	10.7	89.3	100
<i>p-value</i>				0.038	
RP				2,759	
95% Confidence Interval (CI)		Lower	1,043		
		Upper	7,297		

Research Results Source January-April 2026

Table 5 shows that of the 28 mothers with parity 0 and ≥ 4 , 6 of them experienced hypertension during pregnancy (21.4%), while of the 103 mothers with parity 1-3 There is Eight of them experienced hypertension during pregnancy (7.8%). The results of the *chi-square analysis* showed a *p-value* <0.05 , namely 0.038 with a RP of 2,758. (95%CI=1.043-7.297). This shows that there is a significant relationship between parity and the incidence of hypertension in pregnancy. Mothers with parity 0 and ≥ 4 have a prevalence of hypertension 2.759 times greater than mothers with parity 1-3. The prevalence ratio is accompanied by a Confidence Interval (CI) and the desired confidence level is 95%. The CI results obtained are 95% (1.043-7.297), which means that the prevalence ratio is found in the target population with a 95% degree of truth ranging from 1.043-7.297.

Mother's Age

Based on the results of the study, it was shown that the majority of pregnant women at the Maja Community Health Center in 2026 who had hypertension were aged <20 and >35 years (17.2%) compared to pregnant women with hypertension aged 20-35 years (5.5%). Maternal age is one of the factors that plays an important role in the occurrence of hypertension in pregnancy. Based on the results of the study, the age group at risk showed a higher tendency to experience hypertension compared to the age group not at risk. In general, the age group categorized as at risk is <20 years and >35 years, because in this age range the physiological condition of the reproductive organs is not optimal or has begun to experience a decline in function.

The results of this study are consistent with research conducted (Yurianti, Umar, Wardhani, & Kameliawati, 2020) at the Rajabasa Indah Community Health Center (Puskesmas), which found that 23.1% of pregnant women with hypertension were aged <20

and >35 years, compared to 7.15% of pregnant women with hypertension aged 20-35 years. These results also align with the theory (Darmayanti, Edi, Meitria, & Bakhriansyah, 2025) that states that those aged <20 and >35 years have a higher risk of pregnancy complications. In addition to biological factors, age is also related to pregnancy experience, lifestyle, and the possibility of comorbidities that can worsen the mother's condition. Therefore, age is an important variable that needs to be considered in efforts to prevent and treat hypertension in pregnancy.

The researchers' assumption is that to reduce the incidence of hypertension in pregnancy at risk ages, several preventive measures are needed at the Maja Community Health Center. First, reproductive health education is provided to adolescents and couples of childbearing age regarding the importance of planning a pregnancy at an ideal age. This education can be provided through youth health posts (Posyandu), pregnancy classes, and community activities. Second, premarital counseling and family planning (KB) services are improved. Health workers provide education to prospective couples and couples of childbearing age regarding the risks of pregnancy at too young or too old ages. Third, integrated *antenatal care* (ANC) services are optimized. Pregnant women, especially those at risk ages, need more intensive monitoring of blood pressure, nutritional status, and other risk factors to prevent hypertension in pregnancy. In addition, early detection of risk factors is carried out through routine screening of pregnant women and empowerment of health cadres to provide education at the community level. Through these activities, it is hoped that the community will better understand the importance of pregnancy at a non-risk age, thereby reducing the incidence of hypertension in pregnancy in the Maja Community Health Center's work area.

Parity

Based on research results, the proportion of hypertension is higher in mothers with high-risk parity (21.4%) compared to those with non-risk parity (7.8%). Based on the research results, pregnant women with high-risk parity show a higher tendency to experience hypertension compared to mothers with non-risk parity. High-risk parity generally includes primigravida (first pregnancy) and grandemultipara (giving birth ≥ 4 times), while non-risk parity is mothers with 1–3 times of childbirth.

According (American College of Obstetricians and Gynecologists, 2022) to primigravidas, the mother's body undergoes a process of adaptation to pregnancy for the first time, including changes in the cardiovascular and immunological systems. This condition can increase the risk of disorders such as hypertension in pregnancy. Meanwhile, in grandemultiparas, repeated pregnancies can lead to decreased reproductive organ function and blood vessel elasticity, increasing the risk of complications, including hypertension (Cunningham, et al., 2022).

The results of this study align with research conducted (Yurianti, Umar, Wardhani, & Kameliawati, 2020) at the Rajabasa Indah Community Health Center (Puskesmas), which found that 10.6% of pregnant women had hypertension with <1 and ≥ 4 blood pressure, and 6.5% had hypertension with 2-3 blood pressure. Therefore, special attention is needed for women with high-risk parities through more intensive monitoring and ongoing health education. Thus, it is hoped that the incidence of hypertension in pregnancy can be minimized through appropriate risk factor management.

The researchers' assumption is that to reduce the incidence of hypertension in pregnancy among high-risk parities, several activities are needed at the Maja Community Health Center as a preventative measure. First, Family Planning (FP) counseling services. Optimizing family planning counseling services to help mothers choose the right contraceptive method to prevent unplanned pregnancies and regulate the number of children. Second, home visits . Health workers visit the homes of mothers with high-risk parities to provide further education, health monitoring, and motivation for family planning use. Third, holding regular classes for pregnant women with specific materials related to the risk of recurrent pregnancies and their impact on maternal and fetal health.

Hypertension in Pregnancy

Based on the results of a study of 131 respondents, 14 pregnant women experienced hypertension during pregnancy, while the majority, 103 pregnant women, did not experience hypertension. These results indicate that the proportion of hypertension in pregnancy in this study was relatively lower than in those without hypertension.

Hypertension in pregnancy is a common complication and a leading cause of maternal and fetal morbidity and mortality worldwide. According to the World Health Organization (WHO), hypertensive disorders in pregnancy contribute to approximately 10-14% of maternal deaths globally. These conditions include gestational hypertension, preeclampsia, and eclampsia, which can have serious consequences if not properly managed (World Health Organization, 2025).

Although the number of hypertension cases in this study was relatively small (14 cases), this condition still requires vigilance because it can develop into more serious complications. The low incidence of hypertension in this study was likely influenced by respondent characteristics, such as non-risk age, safe parity, and compliance of pregnant women with antenatal care (ANC) checkups. Routine ANC checkups allow healthcare providers to detect elevated blood pressure and other risk factors early.

In theory, hypertension in pregnancy occurs due to impaired endothelial function and an imbalance between vasoconstrictor and vasodilator factors, leading to increased blood pressure. Additionally, risk factors such as extreme age (<20 years or >35 years), parity, obesity, a history of hypertension, and genetic factors also contribute to the development of hypertension in pregnancy (American College of Obstetricians and Gynecologists, 2020).

The results of this study are supported by research in journals (Chang, Seow, & Chen, 2023) which state that hypertension in pregnancy is a frequent complication (around 2–15% of pregnancies) and has the potential to threaten the safety of both the mother and the fetus, thus requiring close monitoring during pregnancy. In addition, the book (Prawirohardjo, 2026) also explains that hypertension in pregnancy is a condition that must be closely monitored because it has the potential to cause disorders in both the mother and the fetus.

The Relationship Between Maternal Age and the Incidence of Hypertension in Pregnancy

The results of the study showed a significant association between maternal age and the incidence of hypertension in pregnancy. This is evidenced by a *p-value* of 0.030 ($p < 0.05$), indicating a statistically significant association between maternal age and the incidence of

hypertension in pregnancy. Therefore, maternal age can be considered a risk factor for hypertension in pregnancy.

Based on the analysis results, it was found that 10 mothers of at-risk age experienced hypertension, while only 4 of those of non-risk age. Meanwhile, in the group without hypertension, there were 48 mothers of at-risk age and 69 mothers of non-risk age. This indicates that the proportion of hypertension cases was found more in the at-risk age group compared to the non-risk age group. The prevalence ratio (RP) value of 3.146 indicates that mothers of at-risk age have a probability of approximately 3.146 times greater to experience hypertension in pregnancy compared to mothers of non-risk age. In addition, the confidence interval (CI) value of 1.040–9.520 which does not cross the number 1 indicates that this result is epidemiologically significant and has a fairly strong association strength.

This research is in line with research conducted by (Yurianti, Umar, Wardhani, & Kameliawati, 2020) that there is a relationship between maternal age and the incidence of hypertension in pregnant women at the Rajabasa Indah Community Health Center with a *p-value* of 0.034. Likewise, research by (Zolekhah, Barokah, & Kusumawardani, 2025) that there is a significant relationship between maternal age and the incidence of hypertension in pregnancy with a *p-value* of 0.037.

Theoretically, in pregnant women under 20 years of age, the reproductive organs are not yet fully developed, which can affect the body's adaptation to pregnancy, including blood pressure regulation. Furthermore, psychological factors and readiness for pregnancy can also trigger stress that contributes to increased blood pressure. (World Health Organization, 2024) Meanwhile, at age 35 years and above, there is a decrease in blood vessel elasticity and organ function, thereby increasing the risk of cardiovascular disorders, including hypertension in pregnancy (ACOG [American College of Obstetricians and Gynecologists], 2022).

The Relationship Between Parity and the Incidence of Hypertension in Pregnancy

The results of the study showed a significant relationship between parity and the incidence of hypertension in pregnancy. This is evidenced by a *p-value* of 0.038 ($p < 0.05$), which means there is a statistically significant relationship between maternal parity and the incidence of hypertension in pregnancy. Based on the results of the data distribution, it was found that 6 mothers with at-risk parities experienced hypertension, while 8 mothers with non-risk parities experienced hypertension. Meanwhile, in the group without hypertension, there were 22 mothers with at-risk parities and 95 mothers with non-risk parities. These data indicate that the proportion of hypertension incidents tends to be higher in the at-risk parity group compared to the non-risk parity group.

The prevalence ratio (RP) of 2.759 indicates that mothers with high-risk parity have a 2.759-fold higher prevalence of hypertension compared to mothers with low-risk parity. This is supported by the 95% Confidence Interval (CI) of 1.043–7.297, which does not cross 1, thus confirming this result as significant and having sufficient association strength.

This study is in line with a study by (Yurianti, Umar, Wardhani, & Kameliawati, 2020) that there is a relationship between parity and the incidence of hypertension in pregnant women at the Rajabasa Indah Health Center with a *p-value* of 0.034. Likewise, research by (Zolekhah, Barokah, & Kusumawardani, 2025) that there is a significant relationship between parity and the incidence of hypertension in pregnant women ($p = 0.022$).

Theoretically, high-risk parity (primiparity or grandemultiparity) may increase the risk of developing hypertension during pregnancy. In primiparas, this condition is often associated with the maternal immune system not yet adapting to placental antigens, which can trigger vascular disorders such as preeclampsia. Meanwhile, in grandemultiparas, decreased reproductive function and recurrent vascular changes can also contribute to increased blood pressure (Peled, et al., 2024).

CONCLUSION

Based on the results of research that has been conducted on the relationship between maternal age and parity with the incidence of hypertension in pregnancy at the Maja Community Health Center, it can be concluded that the majority of pregnant women at the Maja Community Health Center do not have hypertension (89.3%), are aged 20-35 years (55.7%), and have parity 1-3 (78.6%). There is a relationship between maternal age ($p\text{-value} = 0.030$) with RP 3.146 and parity ($p\text{-value} = 0.038$) with RP 2,759 with the incidence of hypertension in pregnancy at the Maja Community Health Center in 2026. It is hoped that health workers, especially midwives, can improve monitoring and education for pregnant women, especially those in the risk age group and risky parity, for early detection of hypertension in pregnancy. Pregnant women are advised to have regular pregnancy check-ups (*antenatal care*) so that health conditions can be monitored regularly and complications such as hypertension can be prevented or treated early. Health institutions also need to improve counseling programs regarding healthy pregnancy planning, including the ideal age for pregnancy and regulating the number of children. For further researchers, it is recommended to examine other factors that can influence hypertension in pregnancy, such as medical history, diet, stress, and lifestyle, so that the research results are more comprehensive.

REFERENCES

- ACOG [American College of Obstetricians and Gynecologists]. (2022). *Pregnancy at Age 35 Years or Older*. ACOG (American College of Obstetricians and Gynecologists).
- American College of Obstetricians and Gynecologists. (2020). *Hypertension in Pregnancy*. Washington, D.S: American College of Obstetricians and Gynecologists.
- American College of Obstetricians and Gynecologists. (2022). *Hypertension in Pregnancy (Practice Bulletin / Obstetric Care Consensus)*. Washington: American College of Obstetricians and Gynecologists.
- Chang, K.-J., Seow, K.-M., & Chen, K.-H. (2023). Preeclampsia : Recent Advances in Predicting, Preventing, and Managing the Maternal and Fetal Life-Threatening Condition. *Int J Environ res Public Health*, IV, 2994. Retrieved from <https://www.mdpi.com/1660-4601/20/4/2994>
- Cunningham, F., Leveno, K., Dashe, J., Hoffman, B., Spong, C., & Casey, B. (2022). *Williams Obstetrics* (26nd ed.). New York: McGraw-Hill Education. Retrieved from <https://accessmedicine.mhmedical.com/book.aspx?bookid=2977>
- Darmayanti, D., Edi, H., Meitria, S. N., & Bakhriansyah, B. (2025). *HIPERTENSI DALAM KEHAMILAN*. Kota Malang: PT Literasi Nusantara Abadi Grup. Retrieved from <https://penerbitlitnus.co.id/portfolio/hipertensi-dalam-kehamilan/>
- Dinas Kesehatan Jawa Barat. (2024). *Profil Kesehatan Jawa Barat Tahun 2023*. Bandung.

- Dinas Kesehatan Jawa Barat. (2025). *Profil Kesehatan Jawa Barat Tahun 2024*. Bandung.
- Dinas Kesehatan Majalengka. (2026). *Data Kematian dan HDK 2023-2025*. Majalengka: Tidak Dipublikasikan.
- Haryanti, D., Maraya, S., Sulastri, & Hariyanti, R. (2025, Juni). Hubungan Usia dan Paritas dengan Hipertensi di Puskesmas Paal Merah II Kota Jambi 2025. *Midwifery Health Journal*, *X*(1), 21-25.
- Kementerian Kesehatan RI. (2024). *Profil Kesehatan Indonesia 2024*. Jakarta: Kementerian Kesehatan Republik Indonesia.
- Peled, T., Weiss, A., Hochler, H., Sela, H. Y., Grisaru, S., & Rottenstreich, M. (2024). Perinatal Outcome in Grand Multiparous Women Stratified by Parity A Large Multicenter Study. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *XXX*, 164-170. Retrieved from <https://doi.org/10.1016/j.ejogrb.2024.07.021>
- Prawirohardjo, S. (2026). *Ilmu Kebidanan (Edisi ke-4)*. Jakarta: PT Bina Pustaka Sarwono Prawirohardjo.
- Puskesmas Maja. (2026). *Data Register Poli Ibu Klaster 2 Rawat Jalan Tahun 2023-2025*. Majalengka: Tidak Dipublikasikan.
- Sastroasmoro, S., & Ismael, S. (2016). *Dasar-Dasar Metodologi Penelitian Klinis (Edisi ke-5)* (5nd ed.). Jakarta: Sagung Seto.
- World Health Organization. (2024). *Adolescent pregnancy*. Geneva: World Health Organization.
- World Health Organization. (2025). *Maternal Mortality*. Geneva: World Health Organization.
- World Health Organization. (2025). *Pre-eclampsia*. Geneva: World Health Organization.
- World Health Organization. (2025). *World Health Day 2025: Healthy Beginnings, Hopeful Futures*. Geneva: World Health Organization.
- Yurianti, R., Umar, M. Y., Wardhani, P. K., & Kameliawati, F. (2020, Agustus). Hubungan Umur dan Paritas Ibu dengan Kejadian Hipertensi pada Ibu Hamil di Puskesmas Rajabasa Indah. *Jurnal Ilmu Kesehatan Indonesia (JIKSI)*, *I*(2), 1-7.
- Zolekhah, D., Barokah, L., & Kusumawardani, A. M. (2025, Desember 20). Hubungan Usia dan Paritas dengan Kejadian Hipertensi pada Ibu Hamil. *JUBIDA (Jurnal Kebidanan)*, *IV*(2), 258-264.