PICTURE OF BLOOD PRESSURE IN PREGNANT WOMEN IN THE SECOND TRIMESTER AT PAYUNG SEKAKI COMMUNITY HEALTH CENTER

Jurista Vilca[1], Deswinda[1], Rina Herniyanti[1]
[1] Program Study of Nursing, Faculty Nursing, Institut Kesehatan Payung Negeri, Pekanbaru, Indonesia
Corresponding author: juristavilca@gmail.com

Abstract
Hypertension in pregnant women is one of the factors that can cause increased maternal mortality rates, the prevalence of pregnant women with blood pressure >140/90 mmHg at the Payung Sekaki Community Health Center in 2021 was 39.2% of cases. This type of research is descriptive because the researchers only wanted to determine the description or distribution of blood pressure (normotension at 0%, prehypertension at 37.5%, and mild hypertension at 62.5%. Factors that can influence blood pressure include gestational age, body mass index, parity, and a history of previous hypertension). The research design was cross-sectional: because data was collected only once at a certain time, not repeatedly or longitudinally. The results of this study found that the majority of pregnant women in the second trimester had blood pressure within normal limits, but there were still some mothers with mild high blood pressure who were at risk of pregnancy complications. Therefore, routine blood pressure monitoring is necessary from the beginning of pregnancy to prevent hypertension in pregnancy.
Keyword: Blood pressure, *pregnant women*, second trimester, pregnantcy hypertension

INTRODUCTION

Hypertension in pregnancy is a blood vessel disorder that occurs before and during pregnancy or the postpartum period, characterized by proteinuria, edema, seizures, or other symptoms (Muthmainnah et al., 2019). Hypertension in pregnancy can be detected through a blood pressure test showing a reading of ≥ 140/90 mmHg (Ningtias & Wijayanti, 2021). Maternal age, if less than 20 years or more than 35 years, also increases the risk of hypertension during pregnancy compared to pregnant women aged 20-30 years. 8 In pregnant women under 20 years of age, hypertension during pregnancy can occur because the uterus has not yet reached its normal size, which can lead to pregnancy complications. Meanwhile, in pregnant women over 35 years of age, hypertension can occur due to degenerative processes in the peripheral blood vessels, which makes pregnant women more susceptible to hypertension (Putri, 2022). Causes of maternal death include bleeding, infection, hypertension during pregnancy, and metabolic disorders, one of which is a compromised immune system (Munar et al., 2024). The highest maternal mortality rate in Riau Province in 2022 was due to bleeding (34%), hypertensive disorders (24%), and other causes, including a high mortality rate (35%).

Deaths are caused by possible complications such as anemia, diabetes mellitus, HIV, STIs, tuberculosis, malaria, worm infections, hepatitis B, and others that occur during pregnancy (Provincial Health Office, 2022). Hypertension in pregnant women can lead to various serious complications. In the mother, this condition can lead to preeclampsia, HELLP syndrome, premature placental abruption, fluid buildup in the lungs, stroke, acute kidney injury, heart failure, hypertension-related heart muscle disorders, heart attack, and even death. Meanwhile, in the fetus, hypertension can inhibit growth, increase the risk of premature birth,

cause health problems in the newborn, cause congenital abnormalities, and even lead to fetal death (Gusti & Susetyo, 2024).

Hypertension in pregnancy can be prevented if risk factors are controlled. These efforts include regular blood pressure monitoring, physical activity, and a healthy, balanced calorie diet with a high-fiber, low-fat, and low-salt intake (Lexi et al., 2023).

According to the Indonesian Health Profile (2021), Indonesia has a prevalence of hypertension among pregnant women of 12.7%. According to the Provincial Health Office (Dinkes Prov, 2022), the highest prevalence rates of hypertension cases are in Bengkalis (85%), and Siak (70%), followed by Rokan Hilir and Meranti (34%), Pekanbaru (32%), Kuantan Singingi (21%), and Indragiri Hulu (13%). In Indonesia, data from the Ministry of Health in 2022 indicates that hypertension contributes to approximately 20–30% of all pregnancy complications. Furthermore, data from the Payung Sekaki Community Health Center in 2021 showed that 39.2% of pregnant women experienced blood pressure above 140/90 mmHg. These high numbers highlight the need for research to understand blood pressure in pregnant women, particularly during the second trimester, which is a period of cardiovascular adaptation and high blood pressure.

RESEARCH METHODS

This study used a descriptive method with a cross-sectional approach. Data collection was conducted once to determine the blood pressure of pregnant women in the second trimester. The study subjects were all pregnant women who underwent prenatal checkups at the Payung Sekaki Community Health Center in December 2024. From this population, eight pregnant women in their second trimester met the study criteria, namely having no chronic diseases other than hypertension and agreeing to participate.

Data collection was conducted by measuring blood pressure using a sphygmomanometer to determine systolic and diastolic blood pressure. Measurements were taken while respondents were in a sitting position after resting for at least five minutes. In addition to blood pressure measurements, brief interviews were conducted to obtain additional information, such as age, number of deliveries (parity), education level, occupation, and history ofhypertension.

RESEARCH RESULTS

Respondent Characteristics

Based on research results (Noradilla & Andayani, 2025), the majority of respondents were in the 20–35 age group, which is considered a healthy reproductive age. Most respondents had 1–3 children, indicating previous pregnancy experience. In terms of education, the majority of respondents had secondary education (junior high school–senior high school), and most worked as housewives, thus having more time to maintain their health during pregnancy.

Blood Pressure Overview of Pregnant Women in the Second Trimester. Blood pressure measurements showed that none of the respondents had normal blood pressure (0%). Three (37.5%) were in the prehypertension category, and five (62.5%) had mild hypertension.

These results indicate that most pregnant women experience mild elevations in blood pressure in the second trimester. This condition can be caused by physiological changes during pregnancy, such as increased blood volume and cardiac output, as well as other factors such as weight gain, physical activity, and diet. Therefore, pregnant women need to

have their blood pressure checked regularly to prevent more severe hypertension.

DISCUSSION

The study results showed that blood pressure in pregnant women in the second trimester tended to increase, with the majority of respondents categorized as mild hypertension. This condition aligns with the theory that in the second trimester, there is an increase in blood volume and cardiac output, which can trigger an increase in blood pressure, especially in women with risk factors such as a high body mass index, high parity, or a family history of hypertension.

These results are also consistent with previous research by Rahmawati (2022), which found that 58% of pregnant women in the second trimester experienced mild hypertension. Other factors that may contribute are lack of physical activity and a high-salt diet. Hypertension in pregnancy can be prevented through regular blood pressure checks, increased nutritional awareness, and health education regarding a healthy lifestyle during pregnancy

CONCLUSION

Most pregnant women in their second trimester at the Payung Sekaki Community Health Center had mild high blood pressure (62.5%), while 37.5% had prehypertension, and no respondents had normal blood pressure. This demonstrates the need for blood pressure monitoring from early pregnancy.

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