

Hubungan Penanganan Komplikasi Kebidanan dan Pelayanan Kesehatan (K4) dengan Kematian Ibu Hamil Hipertensi di Jawa Timur

The Relationship between Handling Midwifery Complications and Health Services (K4) with Maternal Mortality Hypertension in East Java

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Submitted: 19-04-2023

Accepted: 05-07-2023

Published: 30-11-2023

Citation:

Atikasari, F., & Hendrati, L. Y. (2023). The Relationship between Handling Midwifery Complications and Health Services (K4) with Maternal Mortality Hypertension in East Java. *Media Gizi Kesmas*, 12(2), 914–919.
<https://doi.org/10.20473/mgk.v12i2.2023.914-919>

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ABSTRAK

Latar Belakang: Kematian ibu hamil hipertensi merupakan salah komplikasi kebidanan atau kehamilan. Upaya pencegahan dan penanggulangan kematian ibu hamil hipertensi dapat dilakukan dengan melakukan penanganan komplikasi kebidanan dan pelayanan kesehatan ibu hamil (K4). Sedangkan di Provinsi Jawa Timur penanganan komplikasi kebidanan dan pelayanan kesehatan ibu hamil (K4) mengalami penurunan pada tahun 2021.

Tujuan: Penelitian ini bertujuan untuk mengidentifikasi sebaran penyakit dan mendeskripsikan hubungan antara kematian ibu hamil hipertensi dengan faktor-faktornya.

Metode: Penelitian ini mengevaluasi kematian ibu hamil di 38 kabupaten/kota di Jawa Timur. Penelitian ini menggunakan uji korelasi Pearson untuk menganalisis data sekunder dari Profil Kesehatan Jawa Timur Tahun 2019-2021. Pengolahan data dilakukan dengan aplikasi SPSS.

Hasil: Adanya hubungan antara cakupan penanganan komplikasi kebidanan dengan kematian ibu hamil hipertensi pada tahun 2021 ($p = 0,000$) dan adanya hubungan antara cakupan pelayanan kesehatan ibu hamil (K4) dengan kematian ibu hamil hipertensi pada tahun 2021 ($p = 0,000$).

Kesimpulan: Cakupan penanganan komplikasi kebidanan dan cakupan pelayanan kesehatan ibu hamil (K4) berhubungan dengan kematian ibu hamil hipertensi. Diperlukan adanya intervensi program kegiatan yang harus dilakukan yaitu lebih memperhatikan kesehatan ibu hamil, khususnya pada penderita hipertensi.

Kata kunci: Kesehatan, Komplikasi, Hamil, Hipertensi, Kematian

ABSTRACT

Background: One of the dangers of midwifery or pregnancy is the mortality of pregnant women with hypertension. By managing midwifery difficulties and health services for pregnant women, efforts may be made to prevent and manage the mortality of pregnant women with hypertension (K4). The management of midwifery difficulties and prenatal care services (K4) reduced in East Java Province in 2021.

Objectives: The purpose of this study was to map out the disease's spread and explain how maternal mortality is related to hypertension and its causes.

Methods: In 38 East Javan regions and cities, maternal mortality was examined. In order to assess the secondary data from the East Java Health Profile in 2019–2021, this study used the Pearson correlation test. Furthermore, SPSS applications were used to analyze the data.

Results: There was a relationship between maternal mortality with hypertension in 2021 and the coverage of midwifery complications ($p = 0.000$), as well as between the coverage of prenatal care services (K4) and the death of pregnant women with hypertension in 2021 ($p = 0.000$).

Conclusion: The treatment of midwifery problems and the availability of prenatal care services (*K4*) were factors in the deaths of pregnant women with hypertension. A program of interventional actions that must be carried out while paying more attention to pregnant women's health, particularly for those with hypertension, was required.

Keywords: Complication, Health, Hypertension, Mortality, Pregnant

INTRODUCTION

Hypertension is a disorder in which the blood pressure in the blood vessels is chronically raised, according to the American Heart Association (AHA) in 2017. When systolic blood pressure is 130 mmHg and diastolic pressure is 80 mmHg, the condition known as hypertension, or high blood pressure, is present. Pregnancy-related hypertension is a prominent global cause of illness and death for both mother and fetus, according to the World Health Organization (WHO) (Arikah et al., 2020).

Pregnancy complications or midwifery crises are situations that arise during pregnancy or delivery that result in the death of both the mother and the child (Dinas Kesehatan, 2020). Low resources, hemorrhage, hypertension, infection, and other comorbidities that the woman had before to becoming pregnant are the leading reasons of mortality. Pregnancy or midwifery complications include hypertension (Nurhikmah & Naser, 2019).

Pregnancy-related hypertension is a non-communicable illness that harms mothers. Chronic non-communicable diseases (NCDs) fall under this category. Between 2007 and 2013, the prevalence of NCDs such hypertension, diabetes, stroke, and joint/rheumatic disorders increased, according to Riskesdas (Basic Health Research). Pregnancy-related hypertension is a common occurrence and the leading cause of maternal death (Alatas, 2019).

The most frequent pregnancy problem, which forms a triad with bleeding and infection, is hypertension. It has an impact on 10% of pregnancies and significantly raises the risk of maternal and perinatal death. According to the estimations, 7.7% of women of reproductive age have hypertension. Up to 10% of pregnancies will be complicated by illnesses related to pregnancy, such as hypertension during pregnancy, preeclampsia, and eclampsia. Pregnancy hypertension is second in Indonesia behind hemorrhage as the leading cause of maternal fatalities. Pregnancy-related hypertension in Indonesia accounts for over 30% of maternal fatalities (Nurfatimah et al., 2020).

When the blood pressure reaches 140/90 or when the systolic pressure rises by 30 mmHg and the diastolic pressure rises by 15 mmHg over the baseline value, gestational hypertension is present. The five leading causes of maternal mortality, according to the Indonesian Ministry of Health (2018), are listed below. Bleeding (28%),

pregnancy-related hypertension (25%), infection (11%), protracted or difficult labor (5%), and abortion (5%) are those (Husaidah & Nurbaiti, 2020).

The goal of the complications or midwifery services is to decrease mother and newborn mortality. These issues or services are ones that safeguard and definitively treat postpartum, maternity, or pregnant women in accordance with the criteria by qualified health professionals at the basic and referral service levels (Dinas Kesehatan Provinsi Jawa Timur., 2020).

To reduce mother and infant mortality, antenatal care (ANC) is a part of health services for expectant women. ANC visits are made by pregnant women to obtain ANC services from a midwife or doctor as soon as they suspect they are expecting. Regardless of gestational age, the *K1* visit is the first time pregnant women meet with health professionals to receive prenatal care. *K4* visits are services for expecting mothers who have at least 4 prenatal checkups, twice in the third trimester and once in the second (Ulfah et al., 2019).

The goal of the Indonesian government is to decrease the country's maternal mortality rate. For *K1* and *K4*, the government has set goals of 95% and 90%, respectively, of antenatal service coverage. This is thought to have an impact on how frequently prenatal care is provided until the *K4* coverage reaches the objective, which is 100%. (Nurhikmah & Naser, 2019).

Based on information from the Health Profile of East Java in 2021, *K1* pregnant woman visits were covered 98.50% of the time, while *K4* visits were covered 90.50% of the time. The *K1* coverage percentage is now 97.70%, up from 90.94% in 2020, whereas the *K4* coverage rate is down from 90.94% in 2020. For the *K4* indicator, East Java Province has fallen short of the minimum service standard's 100% target. In 2021, the range of services for midwifery problems also declined. The percentage of midwifery problems handled in 2020 was 97.7%. In contrast, 94.3% of women will have access to midwifery care by 2021. 2021 will experience a decrease even if the aim of 80% has been met (Dinas Kesehatan Provinsi Jawa Timur., 2021). Based on the previous description, this study aims to determine the relationship between maternal mortality and hypertension with the treatment of midwifery difficulties and the availability of maternal health services (*K4*).

METHOD

This study was a unit analysis of population correlation data collected from 38 districts and cities in East Java. The coverage of midwifery complications and health services for pregnant women (*K4*) was the independent variable, while maternal death pregnancy hypertension served as the determining variable. The Provincial Health Profile Book of East Java in 2019, 2020, and 2021, which lists all necessary variables, contains the secondary data that was gathered from 38 districts and cities. There was highly extensive information from 38 districts and cities in East Java about statistics on hypertension maternal mortality, coverage management of midwifery difficulties, and coverage of the health services for pregnant women (*K4*) in the Health Profile Book of East Java Province 2018, 2019, and 2020. All East Javan cities or regencies which encountered cases of maternal deaths caused by hypertension in 2019–2021 are the criterion for the data required. It can therefore support the secondary data required for this investigation.

The Kolmogorov-Smirnov test was used to check the data's normality first. The sample data was examined to see if they fit the normal distribution using the Kolmogorov-Smirnov test. Before establishing a link between the prevalence of hypertension-related maternal deaths and the

provision of health services to expectant women (*K4*) in each district and city in East Java, the normality of the distribution was examined. The term "normally distributed" refers to data that was drawn at random from the general population. When the significance value was more than or equal with 0.05, the variable or data was concluded to be normally distributed.

RESULT AND DISCUSSION

Tables 1 and 2 provide the results of the data which have been tested. Maternal mortality from hypertension, the treatment of obstetric problems, and maternal health services (*K4*) in East Java in 2019–2021 were the data variables submitted to the test.

Based on the SPSS test results, it is essential to categorize the variety of connections. If the core findings range between 0.00 and 0.25, it is said that the connection is very weak. If the correlation coefficients fall between 0.26 and 0.50, it is considered satisfactory. When the correlation findings range between 0.51 and 0.75, it is indicated that the correlation is strong. If the correlation results are between 0.76 and 0.99, it is claimed that the correlation is quite strong. If the correlation coefficients are at 1, then the correlation is considered to be perfect.

Table 1. Results of Normality Test for Maternal Hypertension Death Cases, Coverage of Handling Midwifery Complications and Maternal Health Services (*K4*).

	CATEGORY		
	Maternal Death Hypertension	Management of Obstric Complications	Maternal Health Service (<i>K4</i>)
RESULTS			
2019			
N	38	38	38
Asymp. Sig (2-tailed)	0.430	0.453	0.091
2020			
N	38	38	38
Asymp. Sig (2-tailed)	0.108	0.349	0.154
2021			
N	38	38	38
Asymp. Sig (2-tailed)	0.267	0.551	0.121

Table 2. The Pearson Correlation Test between Midwifery Handling Coverage, Health Service Coverage (*K4*), and Number of Poor People with Hypertension Maternal Death Incidence in 2019-2021

Factors	Sig. (2-tailed)	Correlation	Coefficient
Management of Obstetric Complications			
2019	0.000	0.762	Very Strong Significance
2020	0.000	0.755	Veri Strong Significance
2021	0.000	0.681	Strong Significance
Maternal Health Services (<i>K4</i>)			
2019	0.000	0.755	Strong Significance
2020	0.004	0.622	Strong Significance
2021	0.000	0.670	Strong Significance

The Distribution and Relationship between Midwifery Complications Treatment Coverage and Maternal Mortality

It was found that in 2019, there were 162 incidents of maternal mortality hypertension in East Java Province, with 125,036 or 100.4% of patients handled by midwifery problems. With a coverage rate of 120,764 or 97.7%, East Java Province dealt with 152 instances of maternal death with hypertension in 2020. East Java Province saw 123 occurrences of maternal mortality due to hypertension in 2021, with a handling rate of 110,395 or 94.3%. Six districts and cities in East Java, including Malang, Jombang, Madiun, Lamongan, Gresik, and Malang, have a poor coverage of midwifery problems in 2021 (10.7% of 38 Regencies and Cities), which is followed by a rise in maternal death from hypertension.

The results of the Pearson correlation test stated that the coverage of handling midwifery complications in 2019 with the deaths of pregnant women with hypertension in 2019 was $0.000 < 0.05$. It indicates that there was a strong correlation between the treatment of midwifery issues and the mortality of hypertensive pregnant women. The correlation value was 0.762, indicating a very great level of association or relationship. The direction of the link between the variables was positive as indicated by the positive correlation value of 0.762.

The results of the Pearson correlation test stated that the coverage of handling midwifery complications in 2020 with the death of pregnant women with hypertension in 2020 was $0.000 < 0.05$. It implies that there was a substantial link between the treatment of midwifery difficulties and the mortality of hypertensive pregnant women. The correlation coefficient was 0.755, which indicates that there was a very significant link or association. Positive correlation coefficient (0.755) was detected. Additionally, there was a positive direction to the relationship between the variables.

Furthermore, the results of the Pearson correlation test stated that the scope of handling midwifery complications in 2021 with the deaths of pregnant women with hypertension in 2021 was $0.000 < 0.05$ which means that there was a significant relationship between the deaths of pregnant women with hypertension and the management of midwifery complications. The correlation coefficient was 0.681. It can be said that the level of strength of the correlation/relationship was strong. The correlation coefficient was positive, which was 0.681. So, the direction of the relationship was positive as well.

From 2019 through 2021, maternal mortality appears to be less common each year. The relationship between maternal mortality with hypertension in 2019–2021 and the coverage of midwifery complications was shown in Table 2. The present findings are consistent with other research,

and the class for pregnant women is one method of addressing midwifery difficulties, whose application can lessen the likelihood and severity of the likelihood that pregnant women would experience issues during pregnancy (Ida & Afriani, 2021). Pregnant women with high risk factors should be assessed, get high-quality prenatal care, and receive communication, information, and education (IEC) on potential difficulties for themselves, their husbands, and their families (Mariyona, 2019). According to the research conducted in the Ogan Komering Ulu Regency, factors including the duration of the workday, the midwives' expertise, and their attitudes also had an impact on how well midwives handled problems (Fatmawati, 2021). When pregnant women with anemia difficulties received midwifery care twice, the pregnancy-related issues were managed, and the pregnant women's hemoglobin level increased (Aini & Juli Selvi Yanti, 2021). Pregnant women must have their midwifery difficulties handled carefully in order to identify them, manage them, and keep them from becoming severe or dangerous.

Six regencies/cities in East Java, out of a total of 38, continue to experience a decline in the management of midwifery problems. According to the justification given above, it was understood that the decrease was caused by health workers' successes in managing midwifery complications, including the length of work, midwives' knowledge, attitudes, and low support for and knowledge of pregnant women and their families.

It can be concluded that managing midwifery complications was crucial to lowering the rate of maternal mortality in cases of hypertension since this risk decreased with increased coverage of midwifery complications.

The Distribution and Relationship between Maternal Health Service Coverage (K4) and Maternal Mortality

In 2019, East Java Province experienced 162 cases of hypertensive pregnant women with maternal health service coverage (K4) of 568,300 or 91.2%. In 2020, East Java Province experienced 152 cases of maternal mortality with hypertension with the coverage of maternal health services (K4) of 556,435 or 90%. In 2021, East Java Province faced 123 cases of maternal mortality with hypertension with coverage of maternal health services (K4) of 536,732 or 90.05%. In 2021, eight regencies/cities (21.05%) of 38 regencies/cities in East Java have low coverage of maternal health services (K4) followed by an increase in maternal mortality cases of hypertension, including Malang Regency, Banyuwangi Regency, Jombang Regency, Madiun Regency, Lamongan Regency, Gresik Regency, Bangkalan Regency, and Malang City.

In addition, the results of the Pearson correlation test stated that the coverage of health

services for pregnant women (*K4*) in 2019 with maternal mortality with hypertension in 2019 was $0.000 < 0.05$ which means that there was a significant relationship between the deaths of pregnant women with hypertension and health services for pregnant women (*K4*). The correlation coefficient was 0.74. It means that the level of strength of the correlation/relationship has a strong relationship. The correlation coefficient was positive, which was 0.740. Therefore, the direction of the relationship was positive as well.

Besides, the results of the Pearson correlation test stated that the coverage of health services for pregnant women (*K4*) in 2020 with the death of pregnant women with hypertension in 2020 was $0.000 < 0.05$, which means that there was a significant relationship between the mortality of pregnant women with hypertension and health services for pregnant women (*K4*). The correlation coefficient was 0.622 which means that the level of strength of the correlation/relationship was strong. The correlation coefficient was positive 0.620. In addition, the direction of the relationship between the variables was also positive.

Furthermore, the results of the Pearson correlation test stated that the service coverage the health of pregnant women (*K4*) in 2021 with the death of pregnant women with hypertension in 2021 was $0.000 < 0.05$, it means that there was a significant relationship between the death of pregnant women with hypertension and health services for pregnant women (*K4*). The correlation coefficient was 0.670 which means that the level of strength of the correlation/relationship is strong. The correlation coefficient was positive which was 0.670; the direction of the relationship between the variables was positive as well.

Because the coverage of healthcare services for expectant women (*K4*) varies every year from 2019 to 2021, the mortality rate for pregnant women with hypertension tends to decline. There were a few reasons that contributed to the low standard of health services for expectant mothers (*K4*). Factors contributing to the instances in Bengkulu Selatan Regency include pregnant women's lack of awareness of prenatal care, their husbands' and families' lack of support, and their lack of media exposure (Sari, 2022). The study was also carried out in Pontianak, where inadequate prenatal care services (*K4*) were a result of inadequate health care facilities and the role of health professionals (Trivina, 2022). According to the research in Tanah Datar, it was found that one of the factors contributing to the poor quality of care for pregnant women was the distance of health facilities from their homes (Febriyeni & Damayanti, 2020). Even though, the value of health services (*K4*) will assist expectant mothers and their unborn children by enabling them to identify difficulties early and reducing the possibility that they will overcome.

In the East Java Province, there were 8 of the 38 regencies/cities which continued to experience a decrease in the availability of prenatal care services (*K4*). The reduction was recognized to be impacted by various circumstances, such as the absence of a spouse and family support for pregnant women, based on the description above. Additionally, the expectant mothers were shielded from the media. Additionally, the lack of prenatal care services, the role of health workers, the distance from homes of health facilities, and the low quality of those services were all factors which contributed to the decline in prenatal care (*K4*).

This study concluded the importance of health services for pregnant women (*K4*) to reduce the mortality rate of pregnant women with hypertension because the higher the coverage of health services for pregnant women (*K4*), the lower the number of deaths of pregnant women with hypertension.

Because the data used in this study were secondary data derived from the East Java health profile, which is readily available online, it was completed in a very short period of time and at a low cost. There are still numerous factors that can be linked to deficits and the mortality of hypertensive pregnant women that are not included in the health profile data.

CONCLUSION

The frequency of treating midwifery difficulties and the mortality of hypertensive pregnant women were significantly correlated. Pregnant women with high blood pressure who die often live in locations with inadequate complication coverage. Additionally, there was a strong correlation between the availability of prenatal healthcare services and the mortality of hypertensive pregnant women (*K4*). In regions with poor access to maternal health services, there are more instances of maternal death with hypertension (*K4*). According to earlier studies, it was also linked to other things including a lack of education, a lack of support from the family and spouse, a lack of proper health care, and other things. Thus, by performing hypertension screenings and providing information, the intervention activity programs need to be carried out with more consideration for the health of expectant mothers.

Acknowledgement

The author would like to thank the East Java Provincial Government, especially the East Java Provincial Health Office for providing data on the cases of maternal mortality with hypertension, the coverage of handling midwifery complications, and the coverage of health services for pregnant women (*K4*).

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