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MEDICAL RECORD-BASED RETROSPECTIVE DESCRIPTIVE STUDY OF THE CHARACTERISTICS OF WOMEN WITH PREECLAMPSIA WHO DELIVERED AT SORONG REGENCY HOSPITAL, SOUTHWEST PAPUA, IN 2025

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ABSTRACT

*Preeclampsia is a pregnancy complication characterized by the onset of hypertension after 20 weeks of gestation and remains one of the leading causes of maternal morbidity and mortality worldwide. Data from Sorong District Hospital indicated an increase in the number of preeclampsia cases in 2025. This study aimed to describe the characteristics of women with preeclampsia who delivered at Sorong District Hospital in 2025. This study employed a descriptive design with a cross-sectional approach. The study population consisted of all women with preeclampsia who delivered at Sorong District Hospital in 2025. A total of 93 respondents were included using a total sampling technique. Data were obtained from medical records using a medical record extraction form and were analyzed descriptively using frequency distributions and percentages. The results showed that most respondents were aged 20–35 years, had multiparous status, and 66% had a previous history of preeclampsia. **Conclusion:** The characteristics of women with preeclampsia at Sorong District Hospital in 2025 were predominantly multiparous women and those with a previous history of preeclampsia. These findings highlight the importance of early detection and optimal antenatal surveillance among pregnant women with these characteristics to reduce the risk of maternal complications*

Keywords: Preeclampsia 1; Maternal Characteristics 2; Parity 3; Previous History of Preeclampsia 4; Medical Records 5

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INTRODUCTION

Preeclampsia is a pregnancy complication characterized by hypertension occurring after 20 weeks of gestation accompanied by organ dysfunction, and it remains one of the leading causes of maternal and neonatal morbidity and mortality. This condition can result in serious complications, including eclampsia, HELLP syndrome, preterm birth, and even maternal and fetal death if not managed appropriately (Situmorang, 2016).

Globally, preeclampsia remains a major public health concern. The World Health Organization (WHO) reports that hypertensive disorders of pregnancy, including preeclampsia, account for approximately 10–15% of maternal deaths in developing countries. In Indonesia, according to the Maternal Perinatal Death Notification (MPDN) report, there were 4,129 maternal deaths in 2023. Furthermore, data from the 2020 Long-Form Population Census indicate that the maternal mortality ratio in Papua Barat Daya Province (prior to the establishment of Papua Province) remained high at 343 per 100,000 live births. These findings indicate that preeclampsia continues to be a significant public health issue requiring special attention.

At Sorong Regency Regional General Hospital, the number of preeclampsia cases increased from 42 cases in 2024 to 93 cases in 2025, making it one of the most common obstetric complications encountered. Various maternal characteristics, including maternal age, parity, multiple pregnancy status, and a history of previous preeclampsia, have frequently been reported among women with preeclampsia and are important to document as a basis for developing early detection strategies and improving the quality of antenatal care services.

Although the incidence of preeclampsia at Sorong Regency Regional General Hospital has continued to increase, information regarding the characteristics of women with preeclampsia in this setting remains limited. Local epidemiological data are essential for planning prevention programs, early detection strategies, and the management of preeclampsia, particularly in the Southwest Papua region. Therefore, this study aimed to describe the characteristics of women with preeclampsia who delivered at Sorong Regency Regional General Hospital in 2025 based on maternal age, parity, pregnancy status, and a history of previous preeclampsia.

METHODS

This study employed a retrospective descriptive observational design based on a medical record review. The study population consisted of all women who delivered and had been diagnosed with preeclampsia at Sorong Regency Hospital in 2025. The sample comprised 93 subjects selected using a total sampling technique. All included subjects had been diagnosed with preeclampsia, and the information was obtained retrospectively from medical records concerning deliveries that occurred in 2025. Data were collected from medical records using a data extraction form and analyzed descriptively in the form of

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frequency distributions and percentages. Data collection was conducted from 05 - 08 January 2026. The operational definitions were divided into independent and dependent variables. The independent variables included maternal age, parity, previous history of preeclampsia, and multiple pregnancy. The dependent variable was the occurrence of preeclampsia.

RESULTS

Table 1. Distribution of Women with Preeclampsia Delivering at Sorong Regency Regional General Hospital in 2025

Characteristics	Frequency (n)	Percentage (%)
Maternal Age		
1. <20 years or >35 years	30	32
2. 20–35 years	63	68
Parity		
1. Primiparous	44	47
2. Multiparous	49	53
Pregnancy Status		
1. Singleton pregnancy	80	86
2. Multiple pregnancy	13	14
Previous History of Preeclampsia		
1. Yes	46	52
2. No	45	48
Total	93	100

DISCUSSION

1. Maternal Age Characteristics

Based on the findings from 93 women with preeclampsia, 68% were within the optimal reproductive age group (20–35 years), while 32% were in the high-risk age group (<20 years or >35 years). In 2025, there were 93 cases of preeclampsia among 1,096 deliveries (8.5%) at Sorong Regency Regional General Hospital.

Theoretically, women aged <20 years and >35 years are at greater risk of developing preeclampsia because of reproductive organ immaturity in younger women and declining vascular function in older women (Klungsoyr et al., 2018; Tessema et al., 2015). However, the present study found that preeclampsia occurred more frequently among women within the optimal reproductive age group than among those in the high-risk age group. This finding is consistent with the study by Mulkiyah Zul Fadhilah et al. (2022), which reported that 22.2% of preeclampsia cases occurred in women aged >35 years, whereas 77.8% occurred among women aged 20–30 years.

These findings suggest that maternal age alone is not the only characteristic associated with preeclampsia. Although most respondents were within the optimal reproductive age range, preeclampsia can occur across all reproductive age groups. This pattern may be influenced by other factors that were not assessed in the present study, such as pre-existing medical conditions, nutritional status, and genetic predisposition. Therefore, routine antenatal care should be provided to all pregnant women to facilitate the early detection of preeclampsia.

2. Parity Characteristic

Parity was one of the maternal characteristics examined in this study. The results showed that most women with preeclampsia at Sorong Regency Regional General Hospital in 2025 were multiparous (53%), while 47% were primiparous.

Theoretically, primiparous women are more susceptible to preeclampsia because maternal immune adaptation to placental tissue has not yet been fully established. In contrast, among multiparous women, the risk may increase when accompanied by other factors such as advanced maternal age, underlying medical conditions, or a previous history of preeclampsia.

These findings indicate that both primiparous and multiparous women require optimal antenatal monitoring to facilitate the early detection of preeclampsia. Further analytical studies are needed to evaluate the association between parity and the occurrence of preeclampsia.

3. Pregnancy Status Characteristics

This study found that singleton pregnancies were more common than multiple pregnancies among women with preeclampsia. A total of 80 respondents (86%) had singleton pregnancies, whereas 13 respondents (14%) had multiple pregnancies. However,

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because this study employed a descriptive design, the findings only describe the distribution of cases and cannot be used to establish a causal relationship between multiple pregnancy and preeclampsia.

Multiple pregnancy has long been recognized as a condition frequently associated with preeclampsia. The increased placental mass in multiple pregnancies leads to higher production of antiangiogenic factors, particularly soluble fms-like tyrosine kinase-1 (sFlt-1), resulting in endothelial dysfunction, vasospasm, and hypertension, which are key mechanisms in the development of preeclampsia. Similarly, Andriani et al. (2022) reported that although only six respondents (1.70%) had multiple pregnancies compared with 343 respondents (98.30%) with singleton pregnancies, the odds ratio was 6.795, indicating that women with multiple pregnancies had approximately 6.8 times greater odds of developing preeclampsia than those with singleton pregnancies.

Although singleton pregnancies predominated in this study, this likely reflects the much higher proportion of singleton pregnancies in the general obstetric population. Nevertheless, the high proportion of preeclampsia among women with multiple pregnancies suggests that this group requires more intensive antenatal surveillance to facilitate the early detection and management of pregnancy complications.

4. Previous History of Preeclampsia

The results showed that most women with preeclampsia at Sorong Regency Regional General Hospital in 2025 had a previous history of preeclampsia (52 %), whereas 48 % had no such history.

Theoretically, a history of preeclampsia is one of the most frequently reported characteristics among women who develop preeclampsia in subsequent pregnancies. This condition is thought to be associated with persistent placental dysfunction, endothelial dysfunction, and genetic and immunological factors that increase susceptibility to recurrent preeclampsia. In addition to increasing the risk of recurrence, women with a history of preeclampsia are also at greater risk of developing long-term cardiovascular diseases, including chronic hypertension and cerebrovascular disease (Harahap & Situmeang, 2022). Fitria Sari et al. (2023) reported a significant association between a previous history of preeclampsia and the occurrence of preeclampsia at Pambalah Batung Regional General Hospital. Similar findings were reported by Antareztha et al. (2021), who demonstrated an association between previous preeclampsia and recurrent preeclampsia at Abdul Wahab Sjahranie Regional General Hospital, Samarinda.

In the present study, most women with preeclampsia had experienced preeclampsia in a previous pregnancy, indicating that a history of preeclampsia is a common characteristic among affected women. However, because this study was descriptive in nature, the findings cannot be interpreted as evidence of a causal relationship between previous preeclampsia and recurrent preeclampsia. Further analytical studies are warranted to investigate this association.

CONCLUSION

The results showed that the characteristics of women with preeclampsia who delivered at Sorong Regency Regional General Hospital in 2025 were predominantly mothers aged 20–35 years (68%), multiparous (53%), with singleton pregnancies (86%), and with a previous history of preeclampsia (66%). Although most cases of preeclampsia occurred among women of optimal reproductive age and those with singleton pregnancies, these characteristics merely describe the distribution of cases within the study population and do not indicate a causal relationship. These findings provide valuable baseline information for enhancing clinical awareness, strengthening early detection strategies, and improving comprehensive antenatal surveillance, particularly among women with a history of preeclampsia.

IMPLICATIONS FOR MIDWIFERY PRACTICE

The findings of this study have several important implications for midwifery practice. Although most women with preeclampsia were of optimal reproductive age (20–35 years) and had singleton pregnancies, preeclampsia can occur even among women who are not traditionally classified as high-risk. Therefore, midwives should not rely solely on conventional risk factors but should implement universal preeclampsia screening for all pregnant women as part of routine antenatal care. This includes regular blood pressure monitoring, proteinuria assessment, and evaluation for clinical signs and symptoms of preeclampsia in accordance with evidence-based antenatal care guidelines.

The high proportion of women with a previous history of preeclampsia highlights the importance of obtaining a comprehensive obstetric history during the first antenatal visit. Identifying women with a history of preeclampsia enables midwives to classify them as high-risk pregnancies, provide closer antenatal surveillance, deliver appropriate health education regarding warning signs, and ensure timely referral when clinical deterioration is suspected.

Furthermore, the high proportion of preeclampsia among women with multiple pregnancies emphasizes the need for more intensive antenatal monitoring in this population. Midwives should strengthen counseling on adherence to antenatal care visits, routine blood pressure monitoring, and recognition of danger signs such as severe headache, visual disturbances, epigastric pain, and reduced fetal movements, enabling women and their families to seek prompt medical attention when necessary.

The findings also underscore the importance of interprofessional collaboration between midwives, obstetricians, and other healthcare professionals in the management of pregnancies complicated by preeclampsia. Early detection, continuous maternal and fetal monitoring, timely stabilization, and appropriate referral are essential strategies to reduce maternal and neonatal complications.

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Overall, this study supports the strengthening of high-quality antenatal care, the implementation of systematic maternal risk assessment from early pregnancy, and the development of standardized protocols for the screening and management of preeclampsia in healthcare facilities. These measures are expected to contribute to reducing maternal and neonatal morbidity and mortality associated with preeclampsia.

Theoretical Implications

This study contributes to the growing body of evidence that maternal characteristics, particularly a previous history of preeclampsia, are important components of risk identification during pregnancy. The findings also demonstrate that preeclampsia can occur among women of optimal reproductive age and those with singleton pregnancies, indicating that reliance on traditional risk-factor screening alone may be insufficient. Therefore, the results support the implementation of universal preeclampsia screening as an integral component of comprehensive, evidence-based antenatal care.

Practical Implications

The findings of this study suggest several practical recommendations for midwifery practice. First, midwives should perform preeclampsia screening for all pregnant women, regardless of the presence or absence of conventional risk factors. Second, a previous history of preeclampsia should be considered a key element of the initial antenatal assessment to facilitate appropriate maternal risk stratification. Third, women with a history of preeclampsia or multiple pregnancies should receive more intensive antenatal surveillance and timely referral when indicated. Fourth, health education for pregnant women and their families regarding the warning signs of preeclampsia should be strengthened to promote early recognition and timely healthcare-seeking behavior. Finally, healthcare facilities should reinforce the implementation of national clinical guidelines and WHO recommendations for the early detection and management of preeclampsia. Collectively, these strategies support evidence-based midwifery practice and contribute to improving maternal and neonatal health outcomes.

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ETHICAL STATEMENT AND CONFLICT OF INTEREST

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Permission to conduct the study was also obtained from Sorong
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Regency Regional General Hospital. The study used secondary data obtained from medical records, and all patient information was anonymized to ensure confidentiality and privacy throughout the research process.

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