An Overview of Pregnant Women's Knowledge Level Regarding The Prevention of Preeclampsia at Puskesmas 1 Kembaran

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ARTICLE INFO

ABSTRACT

Background: Approximately 75% of maternal deaths are caused by various pregnancy-related complications, including preeclampsia. Preeclampsia is characterized by blood pressure levels of 140/90 mmHg accompanied by proteinuria and can lead to serious complications such as maternal death, prematurity, intrauterine growth restriction (IUGR), and fetal death. Its prevention largely depends on the knowledge of pregnant women regarding risk factors, signs and symptoms, and preventive measures. Objective: To describe the level of knowledge among pregnant women about the prevention of preeclampsia at Puskesmas (Community Healthcare Center) 1 Kembaran. Method: This study used a descriptive quantitative design involving 83 pregnant women selected through consecutive sampling. The instrument used was a 15-item questionnaire using the Guttman scale (true/false). Univariate data analysis was presented in the form of frequency and percentage distributions. Results: The findings showed that the majority of pregnant women had a good level of knowledge (53.0%), followed by a moderate level (39.8%), and a low level of knowledge (7.2%). Conclusion: Most respondents demonstrated a good level of knowledge regarding preeclampsia prevention, which is expected to contribute to reducing the risk of pregnancy complications.

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1. INTRODUCTION

The Maternal Mortality Rate (MMR) remains a major issue in global health. According to the World Health Organization (WHO), in 2020, the number of maternal deaths reached 287,000, with the majority caused by pregnancy complications. The main complications contributing to nearly 75% of all maternal deaths include severe bleeding, hypertension during pregnancy (preeclampsia and eclampsia), postpartum infections, and complications from unsafe abortions (WHO, 2024). Among these complications, preeclampsia accounts for approximately 10% of all pregnancy-related issues and causes over 50,000 maternal deaths and 500,000 infant deaths (Sharma et al., 2024).

Preeclampsia is a condition characterized by blood pressure above 140/90 mmHg accompanied by proteinuria. This condition can lead to preterm birth, Intrauterine Growth Restriction (IUGR), stillbirth, or even maternal death. The following factors are often identified as risk factors for preeclampsia: age, parity, history of

previous preeclampsia, history of hypertension, genetic factors, maternal knowledge, antenatal care (ANC), history of contraceptive use, and maternal occupation (Elsanti & Aprilina, 2016; Sari & Fransiska, 2023).

This study aims to provide an overview of pregnant women's knowledge about preeclampsia prevention, thereby serving as a basis for healthcare providers to deliver appropriate education and interventions to reduce the risk of preeclampsia in pregnant women.

2. RESEARCH METHOD

This study employs a quantitative approach with a descriptive design, aiming to portray the respondents' level of knowledge objectively, without any intervention. Data were collected using a structured questionnaire, converted into numerical scores, and analyzed through descriptive statistical methods, such as percentages and frequencies. The findings are then presented in the form of categorized knowledge levels (good, sufficient, poor) to provide a clear and accurate depiction of the respondents' condition. The population in this study was all pregnant women in the working area of Puskesmas 1 Kembaran. The sample size was 83 people, calculated using the Slovin formula, with consecutive sampling technique, which is the selection of subjects who meet the inclusion criteria until the required number is reached within a specified period. Data collection was conducted from February 25 to March 25, 2025, at Puskesmas 1 Kembaran, Kembaran Subdistrict, Banyumas Regency (Sugiyono, 2023).

The instrument used in this study was a questionnaire. A questionnaire is a data collection method that involves providing a list of written questions to respondents (Noor, 2022). This study used a questionnaire adapted from the research by Netty et al (2019) and had undergone validity and reliability testing. The validity test was conducted by previous researchers using the Pearson Product Moment technique, with the results showing that the correlation of each question item was higher than the table r value at a significance level of 5%, with the highest Product Moment r value of 0.946 and the lowest of 0.389. Reliability testing was conducted using Cronbach's Alpha method, with a value of 0.797 > 0.6, indicating that the questionnaire has a good level of consistency. Since it is descriptive in nature, this study used univariate analysis to describe the frequency distribution of each variable. This study has also obtained ethical approval from the Health Research Ethics Committee of Muhammadiyah University Purwokerto (KEPK-UMP) with registration number KEPK/UMP/332/II/2025, thus deemed ethically acceptable to be conducted.

3. RESULT AND DISCUSSION
Based on the results of the study, the following conclusions were drawn:
    3.1 Characteristics of pregnant women at Puskesmas 1 Kembaran
        The study was conducted at Puskesmas 1 Kembaran from February 25 to March 25, 2025. The number of respondents was 83 pregnant women

Table 1 Frequency Distribution of Characteristics of Pregnant Women at Puskesmas Kembaran 1 (n=83)

	Characteristics	Frequency (f)	Percentage (%)
Age	At risk (< 20 or > 35 years old)	8	9.6
	Not at risk (20-35 years old)	75	90.4
Total		83	100.0
Gestational age	First trimester (0-12 weeks)	20	24.1
	Second trimester (13-28 weeks)	30	36.1
	Third trimester (29-40 weeks)	33	39.8
Total		83	100.0
Education	Elementary School	8	9.6
	Junior High School	27	32.5
	Senior High School	39	47.0
	University	9	10.8
Total		83	100.0
Occupaction	Civil servant	1	1.2
	Private sector employee	11	13.3
	Housewife	63	75.9
	Trader	5	6.0
	Other	3	3.6
Total		83	100.0
Parity	Primigravida (first pregnancy)	35	42.2
	Multigravida (2nd to 4th pregnancy)	47	56.6
	Grande Multigravida (>4th pregnancies)	1	1.2
Total		83	100.0

The characteristics of pregnant women at Puskesmas 1 Kembaran in Table 4.1 show that the majority are in the non-risk age group, accounting for 90.4%. The distribution of pregnancy ages among respondents is fairly even, with the largest proportion in the third trimester (39.8%), followed by the second trimester (36.1%) and the first trimester (24.1%). Based on education, the majority of respondents had at least a high school education (47%). Most respondents were housewives (75.9%). Respondents with multigravida parity dominated, accounting for 56.6%.

Based on the research findings, the majority of pregnant women at Puskesmas 1 Kembaran are of non-risk age (20-35 years), possibly due to increased public awareness of the ideal age for pregnancy through education, counseling, and access to information from health workers. In addition, local social and cultural norms tend to encourage pregnancy at a productive age, rather than in adolescence or later. This finding is consistent with a previous study by Royani and Nurrohmah (2023), which stated that the majority of pregnant women were aged 20-35 years (75.9%). Similar findings were reported by Hajar et al (2022), emphasizing that women of reproductive age are more likely to seek antenatal care and plan pregnancies within this optimal age range.

The majority of respondents in this study were in their third trimester of pregnancy. This is likely because during the final trimester, pregnant women more frequently visit health centers as part of their preparation for childbirth, making them easier to reach during data collection. Additionally, during this trimester, pregnant women are generally more proactive in seeking information about pregnancy warning signs, childbirth preparation, and potential complications, including preeclampsia. This condition is in line with the study by Allatif et al (2024) which showed that most respondents were also in their third trimester (66.0%). Another study also noted that women in the third trimester tend to have higher engagement in antenatal care services, as they become more attentive to maternal and fetal health monitoring (Zhanuarty et al., 2018).

Most respondents in this study had a high school level of education. This may be attributed to improved access to formal education and increased public awareness of the importance of completing secondary schooling. A high school education generally provides adequate cognitive ability to comprehend health information, including the prevention of pregnancy complications such as preeclampsia. Pregnant women with this educational background also tend to be more responsive to counseling and health education provided by healthcare professionals. Similar educational patterns were reported in previous research Royani and Nurrohmah (2023). Another study also emphasized that educational attainment plays a crucial role in influencing health literacy and decision-making during pregnancy (Harianto, 2017).

The majority of respondents were housewives. This is related to the characteristics of the area, which is classified as semi-urban, where women's roles are still dominated by domestic activities such as managing the household and caring for children. Although access to health services is adequate, formal employment opportunities for women in this area are relatively limited. This condition is in line with the research by Sofia et al (2021), which also showed a dominance of housewives (89%). Another study also highlighted that women who are not engaged in formal employment are more likely to follow routine prenatal care schedules and seek health information regularly (Harianto, 2017).

The majority of pregnant women at Puskesmas 1 Kembaran are multigravida mothers, likely due to the high birth rate within the reproductive age range and the cultural values of the community that still prioritize having more than one child. Previous pregnancy experiences among multigravida mothers also enable them to be more accustomed to undergoing pregnancy examinations and receiving health information. These findings are in line with the research by Royani and Nurrohmah (2023), which shows that most pregnant women are also multigravida, namely 60 respondents (72.3%). Another study also noted that multigravida women tend to have higher participation in maternal health services due to their prior exposure to pregnancy-related education and counseling (Karlina et al., 2020).

3.2 Level of knowledge of pregnant women about preeclampsia prevention at Puskesmas 1 Kembaran

Table 2 Frequency Distribution of the Level of Knowledge of Pregnant Women at Puskesmas 1 Kembaran about Preeclampsia Prevention (n=83)

Level of Knowledge	Frequency (f)	Percentage (%)
Good	44	53.0
Fair	33	39.8
Poor	6	7.2
Total	83	100.0

Based on the results of the study, it was found that the majority of respondents had a good level of knowledge, which was likely due to several factors, such as access to information through health workers during antenatal care (ANC) visits, formal education, and previous pregnancy experiences. Community health centers, as primary care centers, play a strategic role in providing regular education, particularly through pregnancy classes and counseling during health checkups.

These findings align with previous research by Sofia et al (2021), which reported that the majority of pregnant women in the Kalibaru Kulon Banyuwangi Puskesmas service area in 2020 had good knowledge (95%) regarding the prevention of preeclampsia. The results of this study differ from a previous study conducted by Royani and Nurrohmah (2023) at the Kartasura Puskesmas, which found that the majority of pregnant women (68.9%) had adequate knowledge about preeclampsia complications. It also differs from the findings by Zhanuarty *et al*. (2018), who concluded that at Dustira Hospital in Cimahi, most respondents (57.7%) had insufficient knowledge about the signs and symptoms of preeclampsia.

The diverse characteristics of the respondents, such as age, gestational age, educational level, occupation, and parity, indicate variations in the level of knowledge among pregnant women. These differences in characteristics are commonly found in various locations and can influence the extent to which individuals are able to understand health information, including information about the prevention of preeclampsia.

4. CONCLUSION

Based on the results of the data analysis and discussion, it can be concluded that the pregnant women at Puskesmas 1 Kembaran are predominantly within the non-risk age range of 20–35 years, most of whom are in their third trimester of pregnancy. The majority have a high school level of education, are housewives, and are multigravida mothers, indicating that they possess prior experience with pregnancy and maternal health services. Furthermore, the overall level of knowledge among the respondents regarding the prevention of preeclampsia is generally good. This suggests that the pregnant women in this setting have adequate awareness and understanding of preeclampsia, including its risks and preventive measures, which may be influenced by their access to health information and engagement with antenatal care services.

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