

RELATIONSHIP BETWEEN CHARACTERISTICS OF PREGNANT WOMEN AND KNOWLEDGE OF DANGER SIGNS IN PREGNANCY

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Article Information

Received:

June 18, 2026

Revised:

June 19, 2026

Accepted:

June 22, 2026

Abstract

Danger signs of pregnancy are conditions that require early detection to prevent maternal and neonatal complications. Pregnant women's knowledge of danger signs of pregnancy is related to various individual characteristics. This study aims to determine the relationship between age, education, occupation and parity of pregnant women with knowledge of danger signs of pregnancy. This study uses an analytical design with a cross-sectional approach. The population in this study were all pregnant women who checked their pregnancy, a total of 59 respondents, the total sampling technique, using a questionnaire and analyzed univariate and bivariate using the Chi square test. The Findings indicated that majority of the participants fell within the age range of 21-35 years old (78%), possessed a high school education (66.1%), were unemployed (52.5%) and had multigravida parity (49.2%). Bivariate analysis showed a significant relationship between the age of pregnant women with knowledge of danger signs of pregnancy ($P = 0.000$), education with knowledge ($P = 0.000$), occupation with knowledge ($P = 0.001$), and parity with knowledge ($P = 0.000$). It can be concluded that age, education, employment status, and the number of pregnant women employed are significantly related to knowledge of pregnancy danger signs. Therefore, more targeted efforts are needed to improve health education, especially for pregnant women with low-risk characteristics and knowledge, through outreach activities and mentoring by health workers.

Keyword: Characteristics, Danger signs of pregnancy, Knowledge maternal, Pregnant women

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1. Introduction

Maternal wellbeing is a major focus in health advancement in Indonesia as it is closely connected to the welfare of mothers and their infants. In spite of numerous initiatives, the rate of maternal mortality (MMR) in Indonesia continues to be a serious public health issue. This is demonstrated by the fact that pregnancy complications such as bleeding, hypertension, and infection still contribute to many maternal deaths in various regions of Indonesia. The government's efforts to reduce MMR are

based on the Sustainable Development Goals (SDGs) for the 2015-2030 period. One of the SDG targets by 2030 is to reduce the maternal mortality rate to below 70 per 100,000 live births, through the proportion of births assisted by skilled and trained health workers and deliveries in health care facilities [1]. In Tegal Regency, it was shown that in 2023, the causes of AKI were 5 cases (27.7%) due to Severe Preeclampsia, 5 cases (27.7%) due to bleeding, 4 cases (22.2%) due to heart disease, 2 cases (11.11%) metabolic

disorders, 1 case (5.5%) infection and 1 case (5.5%) due to other causes [2].

Pangkajene Health Center, shows that there are cases of pregnant women with health risks such as anemia risk factors, Lila <23.5 cm, age risk factors, hypertension, and others. One of the causes of high maternal mortality is pregnancy complications that can appear through pregnancy danger signs. Pregnancy danger signs can threaten the safety of the mother and the baby in the womb. For this reason, strong knowledge and motivation are needed so that mothers check their pregnancy regularly. Knowledge of danger signs in pregnancy is very helpful in reducing MMR, because by knowing the danger signs of pregnancy, a pregnant woman will more quickly seek health care so that risks in pregnancy will be detected and handled earlier. The government's efforts to reduce MMR by using sustainable development Sustainable Development Goals (SDGs) valid for 2015-2030. One of the SDG targets in 2030 is to reduce maternal mortality to below 70 per 100,000 live births, through the proportion of births assisted by skilled, trained health workers and deliveries in health care facilities. The main causes of maternal death are hemorrhage, hypertension, infection and indirect causes, mostly due to the interaction between pre-existing medical conditions and pregnancy [3].

2. Methods

The type of research used is quantitative. This research design is descriptive correlation using a cross-sectional approach. Each research subject is only observed once at a time during the study. The research location is in Pangkajene, Tegal Regency, the research implementation in November 2025. The population in this study were all 59 pregnant women. The sampling technique was total sampling. The research instrument used a characteristic questionnaire, generally containing the mother's name, age, education, employment status and parity. The

knowledge of pregnant women consists of 20 questions with Yes and No answers, if the correct answer is given a score of 1 and if the wrong answer is given a score of 0. The measurement results, if the respondent can answer 76-100% of the questions correctly, the knowledge is good, if able to answer 56-75% of the questions, the knowledge is sufficient, and if able to answer $\leq 55\%$ of the questions, the knowledge is insufficient. Data analysis used the Chi Square test, a statistical test using the SPSS computer program.

3. Results and Discussion

A. Characteristics of pregnant women

Tabel 1. Distribution of characteristics of pregnant women

Characteristics	n	%
Age of Pregnant		
Mother	46	78,0
21-35 th	13	22,0
>35 th		
Education		
JHS	10	16,9
SHS	42	66,1
College	10	16,9
Employment Status		
Work	28	47,5
Doesn't work	34	52,5
Paritas		
Primigravida	31	52,5
Multigravida	29	49,1
Grandemultigravida	2	3,4
Total	59	100%

Source: Primary Data

Most participants were between the ages of 21 and 35 years (78.0%), showing that pregnant women of healthy reproductive age were the most represented group. Regarding their educational background, a large portion of the participants had completed high school (66.1%), indicating that secondary education was the predominant level among pregnant women involved in this research. In terms of their job situation, over half of the respondents were not employed (52.5%), and concerning their pregnancy history, most participants were first-time mothers (52.5%), suggesting

that a significant number had prior experience with pregnancy.

B. Bivariate Analysis

Tabel 2. The relationship between maternal age and knowledge about danger signs of pregnancy

Age of Pregnant Mother	Sufficient Knowledge						Amount		P Value
	Not enough		Knowledge		Good				
	n	%	n	%	n	%	n	%	
21-35 years	5	8,4	30	50,8	11	18,6	46	78	0,000
35 years	0	0	2	3,4	11	18,6	13	22	

Source: Primary Data

Based on table 2, it is known that the majority of pregnant women aged 21-35 years have a sufficient level of knowledge, namely 30 people (50.8%), followed by a good category of 11 people (18.6%) and a poor category of 5 people (8.4%). Meanwhile, in the group > 35 years there were no mothers with poor knowledge category. A small portion was in the sufficient category as many as 2 people (3.4%) and the majority was in the

good category as many as 11 people (18.6%). The results of statistical tests showed a p-value of 0.000 ($p < 0.05$) which means there is a significant relationship between the age of pregnant women and the level of knowledge about danger signs of pregnancy. This shows that mothers with a more mature age tend to have better knowledge which can be related to maturity of thinking and broader life experience.

Tabel 3. The relationship between maternal education and knowledge of danger signs during pregnancy

Pregnant Women's Education	Sufficient Knowledge						Amount		P Value
	Not enough		Knowledge		Good				
	n	%	n	%	n	%	n	%	
JHS	3	5,1	7	11,7	0	0	10	17	0,000
SHS	2	3,4	25	42,3	12	20,3	39	66,1	
College	0	0	0	0	10	17	10	17	

Source: Primary Data

Based on table 3, pregnant women with junior high school education mostly have sufficient knowledge category as many as 7 people (11.7%), and there are still mothers with insufficient knowledge as many as 3 people (5.1%), and no mothers were found with good knowledge category. Among pregnant women with high school education, the majority of knowledge is sufficient as many as 25 people (42%), followed by knowledge as many as 39 people (66.1%) and a small portion is in the poor category as many as

2 people (3.4%). Meanwhile, all pregnant women with college education have a good category as many as 10 people (17.0%), and no knowledge category is found in the poor or sufficient category. The results of the statistical test showed a value of $p = 0.000$ ($p < 0.05$), which means there is a significant relationship between the level of maternal education and knowledge of danger signs of pregnancy. This finding shows that the higher the level of maternal education, the better the knowledge of danger signs of pregnancy.

Tabel 4. The relationship between maternal occupation and knowledge of pregnancy danger signs

Pregnant Women's Work	Sufficient Knowledge								P Value
	Not enough		Knowledge		Good		Amount		
	n	%	n	%	n	%	n	%	
Work	3	5,1	17	28,8	8	13,4	28	47,4	0,001
Doesn't work	2	3,4	15	25,4	14	23,7	31	52,5	

Source: Primary Data

Based on table 4, most of the working pregnant women have sufficient knowledge category, as many as 17 people (28.8%), followed by good category as many as 8 people (13.4%) and a small number have poor knowledge as many as 3 people (5.1%). In the group of pregnant women who do not work,

most have good knowledge category, namely 14 people (23.7%), followed by sufficient category as many as 15 people (25.4%) and only 2 people (3.4%) who have poor knowledge category. The results of the statistical test show a value of $p = 0.001$ ($p < 0.05$) which means there is a significant relationship.

Tabel 5. The relationship between maternal parity and knowledge of pregnancy danger signs

Parity of Pregnant Women	Sufficient Knowledge						Amount		P Value
	Not enough		Knowledge		Good				
	n	%	n	%	n	%	n	%	
Primigravida	3	5,1	17	28,8	8	13,4	28	47,4	0,000
Multigravida	2	3,4	15	25,4	12	20,3	29	49,1	
Grandemultigravida	0	0	0	0	2	3,4	2	3,4	

Source: Primary Data

Based on table 5. Most of the primigravida pregnant women have sufficient knowledge as many as 17 people (28.8%) followed by good category as many as 8 people (13.4%) and there are still mothers with insufficient knowledge as many as 3 people (5.1%). In the multigravida group, most of the mothers have sufficient knowledge as many as 15 people (25.4%), but the proportion of good knowledge is higher than primigravida, namely 12 people (20.3%) and a small portion who have insufficient knowledge as many as 2 people (3.4%). while all grandemultigravida pregnant women have good knowledge as many as 2 people (3.4%) and no knowledge was found in the insufficient or sufficient category. The results of the statistical test showed a value of $p=0.000$ ($p<0.05$) which means there is a significant relationship between maternal parity and knowledge of pregnancy danger signs. This finding shows that the higher the mother's parity, the better the level of knowledge that can be related to previous pregnancy and childbirth experiences.

The Influence of Maternal Age on Knowledge of Danger Signs of Pregnancy

The results of the study showed a significant relationship between the age of pregnant women and their level of knowledge about pregnancy danger signs ($p<0.05$). All pregnant women aged >35 years had good knowledge, while in the 21-35 age group, there were still mothers with insufficient knowledge. This finding indicates that age is related to maturity of thinking and life experience, which influences the mother's ability to understand and remember health information.[4][5] Mothers of more mature age tend to be better able to assess pregnancy risks and are more active in seeking health information, both through health workers and other information media.

The relationship between maternal education and knowledge of danger signs during pregnancy.

This study found a significant relationship between maternal education level and knowledge of pregnancy danger signs ($p<0.05$). Mothers with a college education all had good knowledge, while mothers with a junior high school education were still found to

have poor knowledge. Education plays an important role in improving mothers' cognitive abilities and understanding of health information [6][7]. The higher the level of education, the better the mother's ability to understand counseling materials, read KIA books and utilize health information provided by health workers, this shows that education is an important factor in forming the knowledge of pregnant women [8][9].

The relationship between maternal occupation and knowledge of pregnancy danger signs

The results of the study showed a significant relationship between maternal employment status and knowledge level about pregnancy danger signs ($P < 0.05$). Pregnant women who did not work had a higher proportion of knowledge in the good category compared to working mothers. This condition can be associated with the availability of time for unemployed mothers to access health services, attend pregnancy classes, and read health materials. Meanwhile, working mothers have limited time availability so that the opportunity to obtain optimal information is more limited [10][11]. Thus, employment status is related to the intensity of utilization of health information sources [12].

The relationship between maternal parity and knowledge of pregnancy danger signs

This study shows a significant relationship between parity and knowledge of pregnancy danger signs ($P < 0.05$). Pregnant and grandigravida mothers have a higher proportion of knowledge in the good category than primigravida mothers [13]. These findings indicate that previous pregnancy and childbirth experiences make women more familiar with danger signs and more alert to conditions that require immediate treatment [14][15].

4. Conclusion

Based on the results of research and discussion regarding the relationship between the characteristics of pregnant women and knowledge of pregnancy danger signs, it can be concluded that: The age of the pregnant mother is significantly related to the level of knowledge about danger signs of pregnancy, where mothers with more mature ages tend to have better knowledge than mothers who are younger.

The mother's level of education is significantly related to knowledge about pregnancy danger signs. The higher the mother's level of education, the better the knowledge she has about pregnancy danger signs.

The mother's employment status is significantly related to knowledge of pregnancy danger signs, which shows a difference in the level of knowledge between pregnant women who work and those who do not work.

Maternal parity is significantly related to knowledge of pregnancy danger signs, where mothers with previous pregnancy experience have a better level of knowledge than mothers who are pregnant for the first time.

Overall, age, education, occupation and parity are interrelated factors and play an important role in shaping the level of knowledge of pregnant women about danger signs of pregnancy.

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