Relationship between Knowledge and Perception of Husband's Support for Pregnant Women at Risk of Preeclampsia and Preeclampsia

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ABSTRACT: Preeclampsia can cause complications for both mother and fetus and can cause death. In an effort to reduce the incidence of preeclampsia, health workers can motivate mothers by providing good health education related to the prevention of preeclampsia. The husband's participation in providing support or assistance can be beneficial for the mother's pregnancy. The objective to describe the relationship between knowledge and perception of husband's support for pregnant women at risk of preeclampsia and preeclampsia. Research Methods: Using quantitative research with analytic observational type with purposive sampling technique on 66 respondents. The study was conducted from February to May 2022 using a questionnaire on knowledge of pregnant women about preeclampsia and perceptions of husband's support. Data collection is done online via the googleform link. Data analysis using chi-square. The results of the bivariate test of knowledge of pregnant women at risk of preeclampsia and preeclampsia obtained p-value 0.885 > (0.05) and perceptions of husband's support for pregnant women at risk of preeclampsia and preeclampsia obtained p-value 0.300 > (0.05). There is no relationship between knowledge and perception of husband's support for pregnant women at risk of preeclampsia and preeclampsia. It is hoped that health workers can increase the information provided to pregnant women who are at risk of preeclampsia and preeclampsia, and motivate families, especially husbands, to support mothers during their pregnancy.

KEYWORDS: preeclampsia; knowledge; husband's support

I. INTRODUCTION

Preeclampsia is a pregnancy syndrome detected in pregnant women when the gestational age is more than 20 weeks characterized by hypertension, proteinuria and or without edema and will end after delivery [1]. Preeclampsia can cause maternal death, the occurrence of prematurity, and can lead to Intra Uterine Growth Retardation (IUGR) and stillbirth [2]. Chronic hypertension, gestational hypertension, and preeclampsia have increased over time as a result of changes in maternal characteristics, such as age and pre-pregnancy weight [3].

Although the exact cause of preeclampsia is unknown, several factors are known to increase the risk in women such as, first pregnancy, maternal age over 35 years, previous history of preeclampsia or family history of preeclampsia, chronic hypertension or pre-existing vascular or renal disease, obesity. , diabetes mellitus, and multiple pregnancies [4]. Daryanti's research [5] found that the majority of pregnant women who experienced preeclampsia ranged in age at risk (< 20 years and > 35 years) as many as 21 people, with low parity (≤ 2) as many as 24 people, and the distance between pregnancies at risk (< 2 years) as many as 19 person. While the history of preeclampsia as many as 27 mothers did not have a previous history of preeclampsia [5].

The increase in the incidence of preeclampsia which tends to increase will have an impact on increasing maternal mortality. The results of the Survey Penduduk Antar Sensus (SUPAS) show the number of maternal deaths obtained from data collection on family health programs at the Ministry of Health in 2020 shows 4,627 deaths in Indonesia. Hypertension in pregnancy is the second leading cause of maternal death in Indonesia with 1,110 cases [6]. In DKI Jakarta Province, the number of maternal deaths in 2020 was 117, with hypertension in pregnancy as the second cause of 25 cases [6].

Early and regular antenatal care can minimize maternal and fetal morbidity and mortality by enabling early detection of preeclampsia [4]. Mother's knowledge plays an important role because it can influence behavior, so pregnant women who have less

knowledge tend not to prevent preeclampsia [7]. Pregnant women who experience preeclampsia can affect their psychological conditions, such as feeling restless because they are full of fear and anxiety about various bad things that can happen to them, especially during childbirth. Someone who experiences stress and anxiety needs support because that person is not alone in feeling the problems he faces by getting support from other people, especially husbands [8]. The husband's role is very important during pregnancy, because with emotional support the husband can produce inner peace and feelings of pleasure in the mother. The husband's involvement in the mother's pregnancy will strengthen the bond between the father and the child as well as between the husband and wife, thus making the mother more calm and comfortable in her pregnancy [9].

Efforts to reduce the incidence of preeclampsia, it is hoped that health workers can motivate mothers by providing good health education and knowledge related to the prevention of preeclampsia. The husband's participation in providing support or assistance such as information, advice, and attention can be beneficial for the mother's pregnancy. So that research is needed that can explain whether there is a relationship between knowledge of pregnant women and perceptions of pregnant women about husband's support for pregnant women at risk of preeclampsia and preeclampsia.

II. METHOD

This study uses an analytical observational quantitative research with a cross-sectional design on 66 pregnant women who checked themselves at the Duren Sawit District Health Center from April to May 2022. The sampling used was purposive sampling technique, with inclusion criteria, namely pregnant women in trimester II – III, living with husband, and pregnant women who have preeclampsia or have one of the risk factors for preeclampsia (first pregnancy, history of preeclampsia, distance between pregnancy and previous pregnancies < 2 years, has co-morbidities (hypertension, diabetes mellitus, kidney failure), age of pregnant women < 20 years or > 35 years, multiple pregnancies, have had blood pressure > 140/90 mmHg during pregnancy, obesity, and have a family history of hypertension).

Data collection uses primary data and secondary data. Secondary data was obtained from documents in the form of patient register books and medical records. While the primary data was obtained by distributing questionnaires through the google form link which was distributed to pregnant women. The researcher provided an online explanation regarding the research carried out and asked the respondent's consent through informed consent in the form of a google form before the respondent filled out the research questionnaire.

The research instrument used was a knowledge questionnaire about preeclampsia with 12 questions and a husband support questionnaire with 25 questions. Bivariate analysis using chi square test. This research has received an ethical statement from the Health Research Ethics Commission of the Health Polytechnic Ministry of Health Jakarta III with the number No.I.B.02.02/KEPK/002/2022.

III. RESULTS

The normality test that has been carried out on the knowledge variable shows the results are not normally distributed with p-value = 0.000 (<0.05), and on the perception variable about husband's support the results are not normally distributed with p-value = 0.007 (<0.05) so that cut off point using the median value.

Based on the research conducted, the following results were obtained:

Table 1. Frequency of Respondents Characteristics

No.	Characteristics of Respondents	Frequency (n)	Percentage (%)
1.	**Mother's age**		
	20 – 35 years	42	63,6
	< 20 years or >35 years	24	36,4
2.	**Mother's Education**		
	Elementary School	2	3,0
	Junior and Senior High School	40	60,6
	Associate or Bachelor Degree Program	24	36,4
3.	**Gestational Age**		
	Trimester II	14	21,2
	Trimester III	52	78,8
4.	**Gravida**		

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	Primigravida	24	36,4
	Multigravida	42	63,6
5.	**Pregnancy Distance**		
	First Pregnancy	23	34,8
	< 2 years	9	13,6
	> 2 years	34	51,5
6.	**History of Preeclampsia**		
	Yes	6	9,1
	No	60	90,9
7.	**Knowledge about Preeclampsia**		
	Good	37	56,1
	Less	29	43,9
8.	**Perceptions of Husband's Support**		
	Good	36	54,5
	Less	30	45,5
9.	**Pregnant Women at Risk of Preeclampsia and Preeclampsia**		
	Preeclampsia	45	68,2
	Risk of Preeclampsia	21	31,8

In the table above, there are data on the characteristics of 66 pregnant women. It was found that most of them were aged 20-35 years, as many as 42 people (63.6%); secondary education (JHS and SHS), as many as 40 people (60.6%); third trimester pregnant women, as many as 52 people (74.3%); multigravida mothers, as many as 42 people (63.6%); mothers with previous pregnancies > 2 years, as many as 34 people (51.5%); did not have a history of preeclampsia, as many as 60 people (90.9%); good knowledge, as many as 37 people (56.1%); have a good husband's support, as many as 36 people (54.5%); and mothers at risk of preeclampsia, as many as 45 people (68.2%).

The results of the bivariate analysis between the knowledge of pregnant women and pregnant women at risk of preeclampsia and preeclampsia:

Table 2. Relationship of Knowledge about Preeclampsia to Pregnant Women at Risk of Preeclampsia and Preeclampsia

Knowledge	Pregnant Women at Risk of Preeclampsia and Preeclampsia				Total		P-value
	Risk of Preeclampsia		Preeclampsia				
	n	%	n	%	n	%	
Good	26	70,3	11	29,7	37	100	0,885
Less	19	65,5	10	34,5	29	100	
Total	45	68,2	21	31,8	66	100	

Cross-distribution was found between knowledge of pregnant women at risk of preeclampsia and preeclampsia. It is known that from 37 pregnant women with good knowledge, 26 people (70.3%) are at risk of preeclampsia. In 29 pregnant women with poor knowledge, 19 (65.5%) of them are at risk of preeclampsia. Based on the results of the analysis using the chi-square test, a p-value of 0.885 (p > 0.05) was obtained, which means that the 5% omission showed that there was no relationship between knowledge of pregnant women and pregnant women at risk of preeclampsia and preeclampsia.

The results of a bivariate analysis of the relationship between perceptions of husband's support for pregnant women at risk of preeclampsia and preeclampsia:

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Table 3. Relationship of Perceptions of Husband's Support for Pregnant Women at Risk of Preeclampsia and Preeclampsia

Perceptions of Husband's Support	Pregnant Women at Risk of Preeclampsia and Preeclampsia				Total		P-value
	Risk of Preeclampsia		Preeclampsia				
	n	%	n	%	n	%	
Good	27	75,0	9	25,0	36	100	0,300
Less	18	60,0	12	40,0	30	100	
Total	45	68,2	21	31,8	66	100	

In the table, the results of the cross-distribution between pregnant women's perceptions of husband's support for pregnant women at risk of preeclampsia and preeclampsia are obtained. It is known from 36 pregnant women with good husband support, 27 (75.0%) of them are at risk of preeclampsia. In 30 pregnant women with less husband support, 18 (60.0%) of them are at risk of preeclampsia. Based on the results of the analysis using the chi-square test, a p-value of 0.300 (p > 0.05) was obtained, which means that 5% omission showed no relationship between perceptions of husband's support for pregnant women at risk of preeclampsia and preeclampsia.

IV. DISCUSSION

Characteristics of Respondents

The results of the analysis of the age characteristics of the respondents showed that the majority of respondents were in the range of 20-35 years, as many as 42 people (63.6%). Of the 42 people, 28 people (66.7%) were at risk of preeclampsia, and 14 people (33.3%) had preeclampsia. The results of this study are in line with research (Yuniarti, Wijayati and Ivantarina, 2017) at the Obstetrics and Gynecology Polyclinic of the Kediri District Hospital, the results obtained with the number of mothers aged 20-34 years more than mothers with age <20 years and >35 years, namely 107 people. (59.1%), with 88 people (48.6%) of whom did not have preeclampsia [10]. This is also in line with previous research conducted by (Handayani, 2019) at Wates Hospital which resulted in 75 mothers aged 20-35 years, 54 (72%) of whom did not have preeclampsia [11]. This is because a good reproductive age is in the range of 20-35 years, so that mothers in that age range are less likely to experience preeclampsia. The risk of preeclampsia is higher in pregnant women who are older. Older mothers are more likely to develop atherosclerosis, which affects small arteries, such as those in the kidneys and uterus, resulting in hypertension [12].

Based on the results of the characteristics of a history of preeclampsia, 6 (9.1%) of them had a history of preeclampsia and in their current pregnancy had preeclampsia. In line with research (Sutrimah, Mifbakhudin and Wahyuni, 2015) at the Roemani Muhammadiyah Hospital in Semarang which obtained the results that 7 people (100%) of preeclampsia mothers had a history of preeclampsia in previous pregnancies [13]. Mothers with a history of preeclampsia are strong predictors of recurrence of preeclampsia in subsequent pregnancies. Some studies show the risk of re-occurrence of preeclampsia is around 20%, but it can change to between 5% and 80% depending on when the mother had previous preeclampsia and its severity [12].

This is in line with research (Ahmad and Nurdin, 2019) at RSIA Siti Khadijah Gorontalo which said that mothers who had a history of preeclampsia had a 4.7 times risk of experiencing preeclampsia when compared to mothers who did not have a history of preeclampsia [14].

Based on gravida status, the majority of pregnant women with preeclampsia were multigravida mothers, as many as 13 people (31.0%) out of 42 people. This is in accordance with previous research by (Handayani, 2019) at the Wates Hospital Kulonprogo, which resulted in 30 people (73.2%) being multigravida pregnant women with preeclampsia [11]. Preeclampsia is often found in women with their first pregnancy, especially with young mothers. This occurs due to immunological maladaptation or the inability of the immune system to the changes that occur as a result of the pregnancy process [12]. In this study, there were no pregnant women aged < 20 years, so pregnant women aged 20-35 years were of good reproductive age. Multigravida mothers whose pregnancy and previous deliveries are more than 10 years apart have the same risk of developing preeclampsia as mothers who have never given birth [11,15]. In this study, more multigravida pregnant women had a pregnancy interval of > 2 years. This can result in pregnant women experiencing preeclampsia due to the distance between pregnancies that are too far from previous deliveries and pregnant women such as having their first pregnancy again, because the uterus was initially empty without a fetus and after pregnancy, the mother's body adapts especially when the placenta begins to form, there will be ischemia. implantation of the placenta, resulting in vasospasm [16].

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Knowledge of Pregnant Women about Preeclampsia

Based on the results of the study, data were obtained from 66 pregnant women with good knowledge, namely 37 people (56.1%), and pregnant women with less knowledge as many as 29 people (43.9%). This shows that the majority of pregnant women have good knowledge. This is in accordance with research conducted (Marbun and Jumriani, 2019) at RSIA Pertiwi Makassar, the results obtained are 23 people (60.5%) good knowledge of pregnant women and pregnant women with less knowledge, namely 15 people (39.5%) [17].

Knowledge is the result of knowing someone about an object using their senses [18]. At the age of 21-30 years, individuals will have great motivation and curiosity in seeking knowledge through reading or hearing information from various sources, both the media or from health workers and the surrounding environment [19]. The majority of pregnant women are in the range of 20-35 years, mothers of sufficient age have mature characteristics and are more capable of managing matters related to their pregnancy, including trying to find information about what is needed. So that the mother has the ability to improve and maintain health, as well as to prevent things that can harm her pregnancy.

Pregnant Mother's Perception of Husband's Support

The results of the study obtained data from 66 pregnant women who had good husband support, as many as 36 people (54.5%), while the other 30 people (45.5%) had less husband support. This shows that pregnant women tend to feel good husband support. This is in accordance with research (Istioningsih, Anggraeni and Prasetya, 2019) at the Kendal District Health Center and Hospital which resulted in 44 people (55%) pregnant women with a good level of family support, and 36 others (45%) with a low level of family support [20].

Husband's support is support given by the husband in the form of emotional support, assessment, instrumental, and information for pregnant women. Pregnant women feel that assessment support and instrumental support are more dominant from their husbands, this is because the majority of pregnant women feel that their husbands do not compare their pregnancy conditions with other people's pregnancies, husbands are not indifferent when pregnant women succeed in carrying out their roles as prospective mothers, and husbands also play a role. active in maternal health examination by taking pregnant women to health facilities. This is in accordance with research (Romalasari and Astuti, 2020) at the Nglipar II Health Center which stated that appreciation support for pregnant women to lead healthy lives and be active in activities, as well as instrumental support such as being delivered by husbands during pregnancy check-ups are significant assistance for pregnant women [21].

However, pregnant women feel that the information support provided by their husbands is lacking, because the husbands let the mothers find information about preparing for childbirth on their own. Although husbands can provide solutions when pregnant women are confused about the health condition of their pregnancy.

Pregnant Women at Risk of Preeclampsia and Preeclampsia

The results of data analysis were obtained from 66 pregnant women, 21 people (31.8%) of whom had preeclampsia, and 45 people (68.2%) were at risk of preeclampsia. In line with research (Marbun and Jumriani, 2019) at RSIA Pertiwi Makassar which obtained results from 38 pregnant women, 33 people (86.9%) of whom were not preeclampsia and 5 people (13.2%) had preeclampsia [17].

Preeclampsia is a condition of hypertension that occurs after 20 weeks of gestation, may be accompanied by proteinuria. Edema although often occurs in preeclampsia, but is considered non-specific because it often occurs in pregnancies that are not accompanied by hypertension [4]. Several factors that can influence the occurrence of preeclampsia are first pregnancy (primigravida), history of preeclampsia, distance between pregnancies < 2 years, comorbidities in the mother such as chronic hypertension, diabetes mellitus, and kidney disease, maternal age > 35 years or more, and multiple pregnancies. or twins, and obesity [12,22].

According to (Martadiansyah Qalbi and Santoso, 2019) this is in accordance with the results of research at RSUP Dr. Mohammad Hoesin Palembang who found that the age of pregnant women 35 years, BMI 23.0 kg/m² and a history of hypertension in pregnancy were risk factors for the incidence of preeclampsia, and the number of parity nulliparas was a protective factor that was significantly related to the incidence of preeclampsia with complications [23].

Based on information through interviews with health workers at the Duren Sawit District Health Center, it was said that at <20 weeks of gestation if pregnant women had risk factors for preeclampsia, they would be followed up directly by making referrals. If a pregnant woman has 2 moderate risks and 1 high risk, then the pregnancy, delivery, and postnatal check-ups are carried out at the hospital. Planned referrals to pregnant women are carried out when there is a maternal condition with risk factors for preeclampsia and there is no need to wait for delivery. So that only data obtained from pregnant women who have one of the risks of preeclampsia.

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Relationship Between Knowledge of Pregnant Women about Preeclampsia and Pregnant Women at Risk of Preeclampsia and Preeclampsia

Based on the results of the study, data were obtained from 66 pregnant women at risk for preeclampsia. It is known that from 37 mothers with good knowledge, 26 people (70.3%) are at risk of preeclampsia. Meanwhile, of the 29 mothers with less knowledge, 19 people (65.5%) were at risk of preeclampsia. This shows that mothers who are both knowledgeable and less likely to only be at risk of preeclampsia.

From the results of the chi square test, the p-value is 0.885 > (0.05). Based on the results of the analysis, it can be concluded that there is no significant relationship between the knowledge of pregnant women on pregnant women at risk and preeclampsia. This study is in line with previous research conducted by (Yunus, Nurlinda and Alwi, 2021) in the Tangeban Public Health Center, Masama District, with p-value = 0.151 (P<0.05), there is no significant relationship between knowledge and preeclampsia in pregnant mother [19]. This study is also in line with research (Malisngorar, Tunny and Talohu, 2017) in Tanah Goyang Hamlet, Huamual District, West Seram Regency, which obtained the results that there was no significant relationship between knowledge, attitude, and prevention of preeclampsia [24]. However, this study is not in accordance with research (Aspar and Agusalim, 2018) which obtained the results of a relationship between maternal knowledge and the incidence of preeclampsia [7].

Knowledge is one of the important things for the formation of one's actions. Knowledge is needed as support in growing self-confidence or attitudes and daily behavior, so it can be said that knowledge is a fact that supports one's actions. Knowledge is one of the factors that influence health behavior [25]. Pregnant women who know and understand the consequences of preeclampsia and how to prevent preeclampsia will have positive behaviors and actions so that they can avoid the impacts and risks of preeclampsia in pregnancy. Good knowledge will affect health behavior so that it can change health behavior for the better.

The absence of a relationship between knowledge of pregnant women at risk may be caused by most of the characteristics of the respondents are pregnant women who do not have preeclampsia and do not have a history of preeclampsia in previous pregnancies. Knowledge of one of them is influenced by experience, if pregnant women who previously had no experience with preeclampsia, pregnant women will not find out more about this.

Relationship of Pregnant Women's Perceptions of Husband's Support for Pregnant Women at Risk of Preeclampsia and Preeclampsia

Based on the results of the study, data were obtained from 66 pregnant women at risk of preeclampsia and preeclampsia. It is known from 36 mothers with good husband support, 27 people (75.0%) of them are at risk of preeclampsia. Meanwhile, out of 30 mothers with less husband support, 18 people (60.0%) are at risk of preeclampsia. It can be concluded, mothers with good or less husband support tend to only be at risk of preeclampsia.

Data analysis using chi-square test, obtained p-value 0.300 > (0.05). Based on the results of the analysis, it can be concluded that there is no significant relationship between perceptions of husband's support for at-risk pregnant women and preeclampsia. This is in line with research which showed that there was no relationship between family support and the severity of preeclampsia with a p-value of 0.892 (> 0.05) [20]. This study is similar to research (Thena, 2017) in the Ladja Health Center Work Area which obtained the results that there was no relationship between husband's support and the incidence of anemia [26]. However, this study is not in line with research conducted by (Kurniawati, Asih and Wahyuni, 2019) in the Singojuruh Community Health Center which found that there was a relationship between husband's support and the incidence of preeclampsia [27].

Husband's support in this study is divided into 4 categories, namely emotional support, assessment support, instrumental support, and information support [28]. Husband's support is one form of caring and affection for a wife. Support can be provided in the form of physical or psychological. The husband has an important role in the health status of the mother during pregnancy. A good husband's support can also give a good spirit to pregnant women to maintain their health through pregnancy check-ups [29].

There is no relationship between husband's support for at-risk pregnant women and preeclampsia, the researcher argues because the majority of respondents are pregnant women who have been pregnant more than once. Data obtained from multigravida pregnant women with husband's support is less as much as 23 people (51.1%). So that the husband feels that his wife has experienced this and lets his wife look for information related to her pregnancy alone, therefore the wife feels less cared for by the husband. The absence of differences in husband's support between pregnant women at risk of preeclampsia and pregnant women who experience preeclampsia can also be the cause of the absence of a relationship between husband's support for pregnant women at risk and preeclampsia, because both pregnant women who experience preeclampsia or not preeclampsia feel the support of their husbands equally. good. However, this study is not in line with research conducted by (Kurniawati, Asih

and Wahyuni, 2019) in the Singojuruh Community Health Center which resulted in a relationship between husband's support and the incidence of preeclampsia with a p-value of 0.004 < (0.05) [27].

V. CONCLUSION

In this study, it can be concluded that knowledge about preeclampsia on pregnant women at risk of preeclampsia and preeclampsia does not have a significant relationship with a p-value of 0.892 (> 0.05). And there is no relationship between perceptions of husband's support for pregnant women at risk of preeclampsia and preeclampsia with p-value 0.300 > (0.05). It was found that most of the respondents' characteristics by age were 20-35 years; maternal education, namely mothers with secondary education; gestational age, namely in the third trimester of pregnancy; gravida status is multigravida mother; pregnancy interval > 2 years; and a history of preeclampsia that is not having a history of preeclampsia.

Health workers, especially nurses, are expected to be able to provide education about preeclampsia and perform early detection of pregnant women who are at risk of preeclampsia. In addition, it can also provide an understanding of the importance of health checks during pregnancy as a detector of pregnancy complications in pregnant women, as well as providing education regarding the importance of the husband's role in maintaining the health of pregnant women.

VI. ACKNOWLEDGMENT

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