

## ***Knowledge and Attitudes of Pregnant Women towards High-Risk Pregnancies***

**Siti Mar'atus Sholikah<sup>1\*</sup>, Fitria Nurwulansari<sup>1</sup>, Elfira Nurul Aini<sup>1</sup>**

<sup>1</sup>Department of Midwifery, Poltekkes Kemenkes Surabaya, Surabaya, East Java, Indonesia

(Correspondence author's email, smsholikah@gmail.com)

### **ABSTRACT**

*High Risk Pregnancies contribute to maternal and infant mortality rates. Risk factors in pregnancy can be screened through antenatal care which one of services is health education to increase knowledge and attitudes towards high-risk pregnancies. This study aims to analyze the relationship of knowledge and attitudes of pregnant women with high risk pregnancy events. This research used cross sectional method with the sample consisted of 82 pregnant women in the working area of Wonoayu Puskesmas in Sidoarjo Regency, taken using a simple random sampling technique. The independent variables are knowledge and attitudes of pregnant women, the dependent variable is the incidence of high-risk pregnancy. Data collection used questionnaires to measure knowledge and attitudes towards high-risk pregnancies, as well as the KSPR checklist for screening high-risk pregnancies. Data analysis using Spearman's Rho and Chi-Square test with significance level of 0.05. The results showed that less than a portion (39%) of respondents with less knowledge, more than a portion (61%) of respondents with a positive attitude, less than a portion (47.6%) of respondents with low risk pregnancies, there is a relationship of knowledge with the risk of pregnancy events high ( $p 0.027$ ) and there is a relationship between the attitude of pregnant women with high risk pregnancy events ( $p 0,000$ ). With the conclusion that knowledge and attitude are significantly related to the incidence of high risk pregnancy. Health workers need to develop intensive education and empower families regarding high-risk pregnancies.*

**Keywords:** Knowledge, Attitude, High Risk Pregnancy

<https://doi.org/10.33860/jik.v17i4.3121>



© 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).

## **INTRODUCTION**

Maternal Mortality Rate (MMR) is one of the problems in Indonesia which is an indicator of the SDGs (Sustainable Development Goals). Based on the Census Figures Survey (SUPAS) in 2020, the MMR is 305 per 100,000 live births. High-risk complications of childbirth and pregnancy are the main causes of maternal death.<sup>1</sup> In 2021 in East Java Province, the MMR reached 98 per 100,000 live births. In 2021 the MMR increased to 234 per 100,000 live births.<sup>2</sup> Data obtained from the Sidoarjo Health Profile, In 2021, maternal deaths were 59 out of 100,000 live births. The K1 coverage achievement in Sidoarjo Regency in 2021 was 98.56% and the K4 coverage achievement was 97.05%, while in

Wonoayu District the presentation of pregnant women classified as high risk was 293 out of 1466 pregnant women (19.9%).<sup>3</sup>

High risk pregnancy is a condition where a pregnant woman has a risk in her pregnancy which will threaten the health of the mother and fetus during pregnancy, childbirth and postpartum. Pregnancy with one or more risk factors has a risk of seriousness but not an emergency condition.<sup>4</sup> This high risk pregnancy does not occur suddenly because the process of this pregnancy occurs gradually. The best effort is to carry out early screening for signs and danger signs of pregnancy for the safety of pregnant women and babies.<sup>5</sup>

High risk pregnancies can have fatal consequences, causing the death of the mother and fetus. The factors that trigger high risk

pregnancies include maternal age >35 years or <20 years, height <145 cm, history of cesarean section, pregnancy interval <2 years or >10 years, as well as history of disease, history of childbirth and poor pregnancy.<sup>6</sup> High risk pregnancies can also occur due to lack of supervision during pregnancy so that pregnancy problems or complications are not detected early. Besides that, the low level of knowledge of pregnant women often ignores pregnancy control so that high risk conditions are not recognized early and treatment is given too late.<sup>7</sup>

Tandipasang's research, 2020, found that there was a significant relationship between the knowledge and attitudes of pregnant women and high risk pregnancies at the Wara Community Health Center, Palopo City.<sup>15</sup> Likewise with Syahda, 2018, there is a relationship between knowledge and attitudes with high risk pregnancies in the work area of the Kampar Health Center.<sup>16</sup>

Antenatal Care (ANC) is an effort to monitor the health of pregnant women and their fetuses, in order to detect problems or complications and make early referrals in an effort to reduce maternal morbidity.<sup>8</sup> In addition, increasing the knowledge of pregnant women is supported by class programs. pregnant women and optimal use of KIA books.<sup>9</sup>

Midwifery care in pregnancy uses the minimum standard of antenatal care 14T. Midwives provide KIE about the condition of the pregnant mother and fetus and the possible risks not only to the pregnant mother, but also to her husband and family. Comprehensive and continuous care for pregnant women is very important as a joint effort between health workers and pregnant women, their husbands, families and the community.<sup>4</sup> This study aims to analyze the relationship between knowledge and attitudes of pregnant women with the incidence of high-risk pregnancies at the Wonoayu Sidoarjo Community Health Center.

## METHOD

This research is correlational analysis using a cross sectional approach, which was carried out at the Wonoayu Public Health Center, Sidoarjo. The opulation was all pregnant women in the Wonoayu Community Public Health Center Working Area, Sidoarjo Regency, numerous 458 women. The sample was determined using the Slovin formula with an

error rate of 10%. A sample of 82 respondents was obtained using a simple random sampling technique, random sampling without looking at the strata of the population.

The research's independent variables are knowledge and attitudes, while the dependent variable is the incidence of high-risk pregnancies. The type of instrument used in data collection is a questionnaire to measure knowledge and attitude that has been checked for validity and reliability, and to measure incidence of high-risk pregnancies used KSPR checklist which standard instrument for identifying high-risk pregnancies. Data analysis used the Spearman's Rho test to determine the correlation with the ordinal data scale and the data source does not have to be the same and Chi Square with a significance level of 0.05.

Ethical Approval The Health Research Ethics Committee of the Polytechnic Health State of Surabaya approved to all of the procedures used in this study, and these organizations were given the following license numbers for the approval: No.EA/314/KEPK-Poltekkes\_Sby/V/2022.

## RESULT

Characteristics of respondents based on Figure 1 shows that of the 82 respondents, the majority were aged 20-35 years, 68 people (82.9%). Based on Figure 2, it shows that of the 82 respondents, less than half were with a gestational age of 7-9 months, namely 34 people (41.5%). Based on Figure 3, it shows that of the 82 respondents, less than 39 people had a high school education (47.6%). Based on Figure 4, it shows that of the 82 respondents, less than half have 1 child, namely 39 people (45.1%).

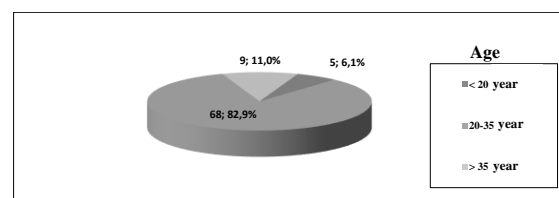
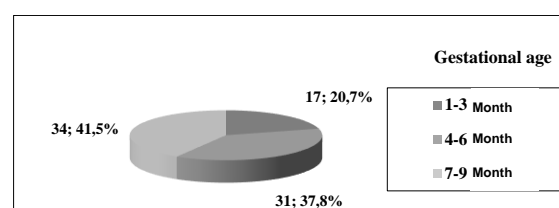
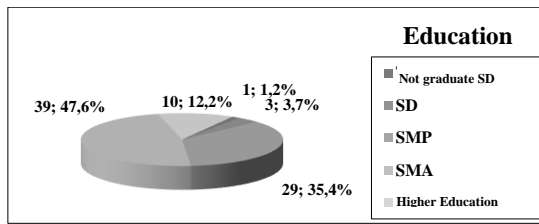


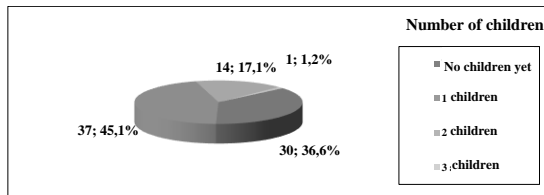
Figure 1. Respondent Age



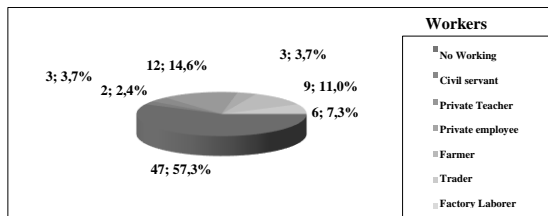
**Figure 2. Gestasional Age**



**Figure 3. Respondent Education**



**Figure 4. Respondent Parity**



**Figure 5. Respondent Job**

Based on Figure 5, it shows that of the 82 respondents, more than half did not work, namely 47 people (57.3%).

**Table 1. Distribution of respondents' knowledge**

Knowledge	Frequency	Percentage (%)
Poor	32	39,0
Moderate	30	36,6
Good	20	24,4
Total	82	100

Based on table 1, it can be seen that of the 82 respondents, less than half had insufficient knowledge, 32 respondents (39%).

**Table 2. Distribution of respondents' attitude**

Attitude	Frequency	Percentage (%)
Negatif	32	39
Positif	50	61
Total	82	100

Based on table 2, can be seen that of the 82 respondents, more than half respondents have positif attitude, about 50 respondent (61%).

**Table 3. Distribution of the incidence of high-risk pregnancies**

Incidence Of High-Risk Pregnancies	Frequency	Percentage (%)
Extremely High	13	15,9
High	30	36,6
Low	39	47,6
Total	82	100

Based on table 3, can be seen that of the 82 respondents, less than half respondents have low risk pregnancies, about 39 respondent (47,6%).

**Table 4. Cross table between knowledge and the incidence of high risk pregnancy**

Know-ledge	Incidence Of High Risk Pregnancies						Total	p-value	
	Extremely High		High		Low				
	F	%	F	%	F	%			
Poor	11	34,4	8	25	13	40,6	32	100	0,027
Mode rate	1	3,3	15	50	14	46,7	30	100	
Good	1	5	7	35	12	60	20	100	
Total	13	15,9	30	36,6	39	47,6	82	100	

Based on table 4, it can be seen that among mothers who are well informed, more than half (60%) have low risk pregnancies (KRR).

Based on the results of the Spearman's Rho test, a significance value (P value) of 0.027 was obtained, which means it was smaller than alpha 0.05; then H1 is accepted, which means there is a relationship between pregnant women's knowledge and the incidence of high-risk pregnancies.

**Table 5 Cross table between attitude and the incidence of high-risk pregnancy**

Attitude	Incidence of High-Risk Pregnancies						Total	p-value	
	Extremely High		High		Low				
	F	%	F	%	F	%			
Negatif	13	40,6	10	31,3	9	28,1	32	100	0,027
Positif	0	0	20	40	30	60	50	100	
Total	13	15,9	30	36,6	39	47,6	82	100	
p-Value 0,000									

Based on table 5, it can be seen that of mothers who have a positive attitude, more than half (60%) have low risk pregnancies (KRR).

Based on the results of the Chi Square test, a significance value (p-value) of 0.000 was obtained, which means it is smaller than alpha

0.05; then H1 is accepted, which means there is a relationship between attitude and the incidence of high-risk pregnancy.

## **DISCUSSION**

### **Knowledge of Pregnant Women**

Knowledge is the result of human sensing, or the result of someone knowing about objects through their senses. Knowledge is an important thing that will influence a person's actions/behavior.<sup>10</sup>

Factors that influence knowledge include age, education, experience, and employment. Age influences a person's ability to understand and think. Age is quite proportional to a person's maturity and thinking or work. In terms of public trust, someone who is more mature will be more trusted than someone who is not yet mature enough. Experience plays a role in repeating one's knowledge which will be used in solving the same problems faced in the past.<sup>11</sup>

A person's job is defined as the activities or tasks that a person carries out within a certain period of time. Work is not a source of pleasure, but aims to earn a living, which will take up time. However, working for women will have an impact on their families.<sup>12</sup>

Assumed knowledge about high-risk pregnancies varies among pregnant women, many factors play a role in this research. Mothers' knowledge about high-risk pregnancies is lacking, which can be related to educational factors, where the average respondent has a high school education. In education at the formal stage, it will provide experience, especially how people think, feel or act.

The assumption that knowledge about high-risk pregnancies is sufficient and good among respondents is related to the majority of respondents' gestational age being in the 3rd trimester. At the Wonoayu Community Health Center there are classes for pregnant women which are held regularly to provide the information that pregnant women need from the 1st trimester to the 3rd trimester. Likewise parity, the previous pregnancy will be a valuable experience for the mother and make the mother more alert in facing various challenges in the current pregnancy.

### **Attitude of Pregnant Women**

Attitude is a person's opinion or tendency

regarding something.<sup>10</sup> Factors that influence the formation of attitudes, the first is personal experience, where everything that has been experienced will influence a person's response to social stimuli. Experience can be gained through education, for example teaching and training, or from mass media and information.

The second factor is the influence of a person or group of people who are considered important. A group of people around us is one of the social components that influences our attitudes, because in general individuals tend to have attitudes that are conformist or in line with the attitudes of people they consider important. The third factor is the influence of social culture, the culture of a person's place of origin will definitely have a big influence on the formation of his attitudes. The fourth factor is mass media which can play a role in forming a person's opinions and beliefs. The new information that comes in will become new knowledge as the basis for a person's attitude towards something.

The fifth factor is the role of educational institutions and religious institutions, namely in terms of understanding moral concepts which will determine an individual's attitude towards something. The sixth factor is the influence of emotional factors, which means that attitudes can be based on a person's emotions, both momentary emotions and persistent emotions.<sup>13</sup>

The results of this study show that more than half of the respondents have a positive attitude which can be caused by employment, age and parity factors. The employment factor shows that the majority work, indicating that respondents will accept and easily adapt to new things. Then, by knowing the experience factor in terms of the number of children, it can be seen that less than half have 1 child. By having 1 child a person already has experience in previous pregnancies. In terms of age, the majority are in the range of 20-35 years. At that age, etymologically a person is already at the adult stage, making a person wiser in making decisions regarding the problems they face.

### **The incidence of high risk pregnancy**

High risk pregnancy is a pregnancy condition where the life or well-being of the mother and baby is disrupted by biophysical and psychosocial abnormalities that occur simultaneously or are unique to the pregnancy. The criteria for a high risk pregnancy can be seen from maternal factors and fetal factors. Maternal

factors include young primi, old primi, grand multipara, pregnancy interval less than 2 years, secondary old primi, age >35 years, height <145 cm, maternal health condition during pregnancy, pregnancy comorbidities, history of bad pregnancy, history of surgery. childbirth, history of caesarean section. Fetal factors include latitude, breech position, multiple pregnancies, fetal death in the womb, hydramnios, excessive fetal growth, premature pregnancy.<sup>4</sup>

In this study it was found that less than half had low risk pregnancies, where the risk factors most often found in pregnant women at the Wonoayu Sidoarjo Community Health Center were KEK (Chronic Energy Deficiency) as many as 24 people, history of abortion as many as 11 people, pregnancy interval  $\geq 10$  years, the same 10 people, 5 children with a distance of <2 years, and 5 people with a gestational age of more than 35 years.

### **The relationship between knowledge and the incidence of high risk pregnancy**

Knowledge is defined as everything the mother knows regarding high-risk pregnancies. Pregnant women who have high knowledge will have more attitudes and behavior towards preventing or avoiding a problem or risk of pregnancy.<sup>14</sup> According to Notoadmodjo (2014), someone who has less knowledge will tend to behave badly, this is in accordance with the results of this study where mothers with knowledge of more or less risk of experiencing a high risk pregnancy.<sup>10</sup>

In this study, it was found that there was a significant relationship between pregnant women's knowledge and the incidence of high-risk pregnancies, where mothers who were knowledgeable were less likely to experience high-risk pregnancies. Meanwhile, mothers who are well informed have a tendency not to experience high-risk pregnancies. These results can be interpreted as meaning that knowledge makes a significant contribution to the incidence of high-risk pregnancies. The results of this research are in line with research by Syukrianti Syahda (2018) with results showing that there is a relationship between knowledge and high risk in pregnancy.<sup>16</sup> This means that it is very important for pregnant women to get

information about high risk pregnancies so that mothers are more alert about their pregnancy. A mother's high level of knowledge also triggers her to have a healthy pregnancy, even if a risky pregnancy is discovered, it can be treated early.

Other assumptions in this study: maternal age, parity, occupation and trimester can also influence the results. The majority of mothers who have experience in previous pregnancies, age within the limits of adulthood, gestational age can also provide a different color to the mother's knowledge about high-risk pregnancies.

### **The relationship between attitudes and the incidence of high risk pregnancy**

Attitude is a behavioral tendency or form of feeling. A person's attitude towards something can be in the form of a tendency to support or not support it. Mothers who have a positive attitude towards high-risk pregnancies will have the awareness to have their pregnancies checked regularly so that if there are problems or risks they can be addressed early.<sup>14</sup>

The results of statistical data analysis show that there is a relationship between the attitudes of pregnant women and the incidence of high-risk pregnancies. Mothers who have a negative attitude have a tendency to experience high-risk pregnancies. Meanwhile, mothers who have a positive attitude have a tendency not to experience high-risk pregnancies.

The results of this research are in line with research by Syukrianti Syahda (2018) with results showing that there is a relationship between attitude and high risk in pregnancy. Based on the description above, awareness of pregnancy check-ups will be high among pregnant women who have a positive attitude towards high-risk pregnancies, so that the incidence of high-risk pregnancies can be prevented.<sup>16</sup>

Researcher's Assumptions The positive and negative attitudes of pregnant women regarding high-risk pregnancies are the result of environmental influences. A positive attitude can be seen from how the mother accepts a high-risk pregnancy, then tries to overcome or prevent the pregnancy from being at risk. It's not easy to do, it requires information and strong motivation from yourself. Meanwhile, the mother's negative attitude, such as assuming that knowing about a

high-risk pregnancy is not very important, ultimately reduces efforts to have a safe pregnancy.

## CONCLUSION

Some of the pregnant women at the Wonoayu Sidoarjo Health Center have less knowledge, more than some have a positive attitude, less than some have low risk pregnancies, there is a significant relationship between the knowledge and attitudes of pregnant women and the incidence of high risk pregnancies.

Mothers must receive information about high-risk pregnancies when they are pregnant, which will help mothers to have a positive attitude, encourage them to always check their pregnancies, and find out what steps they should take when signs of high-risk pregnancies appear. Mothers can get this information through various means such as routine antenatal care, classes for pregnant women and even various types of technology-based services that mothers can use to increase their knowledge. Mothers also need to consume balanced nutritious food and get enough rest so that the mother's health during pregnancy is maintained.

For health workers, especially midwives, to increase education regarding high risks by utilizing various educational media in pregnancy to reduce the incidence of high risks in pregnant women by increasing ANC visits on an ongoing basis.

## REFERENCES

1. Kemenkes RI. Profil Kesehatan Ibu dan Anak 2022. 2022.
2. Dinkes Jatim. Profil Kesehatan Dinas Kesehatan Provinsi Jawa Timur 2021. Dinas Kesehatan Provinsi Jawa Timur. 2022;1-149.
3. Dinkes Kab. Sidoarjo. Profil Kesehatan Kabupaten Sidoarjo Tahun 2022. Dinas Kesehatan Kabupaten Sidoarjo. 2022;200.
4. Rochjati P. Skrining Antenatal Pada Ibu Hamil Edisi 2 (Pengenalan Faktor Risiko Deteksi Dini Ibu Hamil Risiko Tinggi. Surabaya: Pusat Penerbitan dan Percetakan Unair; 2013.
5. Saifuddin A. Buku Panduan Praktis Pelayanan Kesehatan Maternal dan Neonatal. Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo; 2014.
6. Fabanjo IJ, Isnaeni YS, Nuryanti Y, Anwar B, Febti, Jayanti D. Hubungan Pengetahuan dengan Sikap Ibu Hamil tentang Kehamilan Resiko Tinggi di Puskesmas Amban. *JURNAL ILMIAH OBGIN : Jurnal Ilmiah Ilmu Kebidanan & Kandungan*. 2018;10(2):74-82.
7. Pontoh AH. Tingkat Karakteristik (Umur, Paritas, Pendidikan) Ibu Hamil Tentang Kejadian Kehamilan Risiko Tinggi. *Jurnal Kebidanan Akbid Griya Husada Surabaya*. 2018;52-9.
8. Titien Kesuma RA. Pemantauan Upaya Penurunan AKI AKB Melalui Kegiatan ANC Gedor Desa Di Kabupaten Musi Rawas Utara Monitoring Efforts to Decrease MMR IMR via ANC Gedor Desa Activities in the Musi Rawas Utara Regency dari program Sustainable Development Goals ( SDG ' s ) pa. 2023;5(1):51-60.
9. Syahda S, Nislawaty. Gambaran Kunjungan Antenatal Care (Anc) Pada Masa Covid-19 Di Wilayah Kerja UPT BLUD Puskesmas Rumbio. *Jurnal Doppler*. 2021;5(2):133-40.
10. Notoatmodjo S. Ilmu Perilaku Kesehatan. Jakarta: Rineka Cipta; 2014.
11. Notoatmodjo S. Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta; 2013.
12. Nursalam. Manajemen Keperawatan. Jakarta: Salemba Medika; 2015.
13. Azwar S. Sikap Manusia (Teori dan Pengukurannya). Yogyakarta: Pustaka Pelajar; 2016.
14. Damayanti. Tanda-tanda Bahaya Kehamilan. Bandung: Erlangga; 2016.
15. Tandipasang F. Hubungan Pengetahuan Dan Sikap Ibu Hamil Tentang Resiko Tinggi Pada Kehamilan Di Puskesmas Wara Kota Palopo Tahun 2019. *Jurnal Kesehatan Luwu Raya*. 2020 Jan 27;6(2):60-5.
16. Syahda S. Hubungan Pengetahuan Dan Sikap Ibu Hamiltentang Risiko Tinggi Dalam Kehamilan Dengan Kejadian Risiko Tinggi Dalam Kehamilan Diwilayah Kerja Puskesmas Kampar. *Jurnal Doppler*. 2018 Oct 20;2(2).