



## ANALYSIS OF FACTORS THAT INFLUENCE THE BEHAVIOR OF PREGNANT WOMAN IN EARLY DETECTION OF HIGH RISK PREGNANCY

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### A B S T R A C T

**Introduction:** Every pregnancy has the possibility of complications that can endanger the mother of baby, both in low risk and high risk pregnancies. One of effort to prevent high-risk pregnancies from pregnant women is to detect early high-risk pregnancies. This study aimed to determine what factors are associated with the behavior of pregnant women in conducting early detection of high risk of pregnancy in PMB Ika Mardiyanti, Jedong Village, Cangkring, Prambon, Sidoarjo. **Method:** This research uses quantitative design with cross sectional research design. The sample in this study was taken by simple random sampling technique. The data collection method uses primary data, by conducting anamnese on the behavior of pregnant women in the early detection of high risk pregnancies. Analysis of the data was made through the use of frequency and percentage and linear regression statistical tests. **Result:** The results showed 17 (56.7%) of respondents aged low risk (20-35 years), 25 (83.3%) attained secondary education, 24 (80%) had sufficient income, 18 (60%) experienced in previous pregnancy care of high-risk pregnancies, 19 (63.3%) knowledgeable enough on detect any signs and symptoms of high risk pregnancies, 12 (40%) have never been exposed to the media, 18 (60%) behavior in the early detection of high risk pregnancies is not achieved. Statistical analysis with linear regression obtained  $p > 0.05$  which means that age, education, income, experience, knowledge, media exposure had no effect on behavior of pregnant women in the early detection of high risk pregnancy in PMB Ika Mardiyanti. **Conclusion:** It is expected that midwives can provide counseling, family empowerment during pregnancy care to increase information, awareness and ability to detect early high-risk pregnancies so as to reduce complications of pregnancy and childbirth. While the role of academics is to make a pocket book that is intended for pregnant women and their families to make it easier to carry out care with a high risk of pregnancy.

## INTRODUCTION

Every pregnancy has the possibility of complications or complications that can endanger the mother or baby, both in low-risk and high-risk pregnancies (Chou et al., 2018). High risk pregnancy is a pregnancy process that has a higher risk and greater than normal or in general pregnancy (both for mothers and babies) with the risk of illness or death before or after the birth process later (Hutahean, 2013). One effort to prevent high-risk pregnancies from pregnant women is to detect early high-risk pregnancies (Mardiyanti, Nursalam, Devy, & Ernawati, 2019b).

The phenomenon in the community at this time there are still many pregnant women and their families who do not and are not able to do early detection of high risk of pregnancy (Mardiyanti,

Nursalam, & Wibowo, 2018). This is proven by the low coverage of early detection of high risk by the community. Lack of community participation in early detection of high risk of pregnancy due to low levels of education and family knowledge, behavior that is less supportive such as social position, economic ability and thus causes families to experience powerlessness in carrying out early detection of high risk of pregnancy (Abas & Fakhredeen, 2017). The factors that influence individuals and families in behavior, among others: personal factors (general attitude, personality traits, life values, emotions and intelligence), social factors (age, sex, ethnicity, education, income and religion) and factors information (experience, knowledge, and media exposure) (Azjen, 2006).

The impact if early detection of high risk pregnancy is not done optimally by the family, among others, is the occurrence of delays called three late. The first is late in recognizing danger signs of pregnancy and childbirth, the second is too late to make a decision, the third is too late to arrive at the hospital or late for referral. Three late results in higher maternal mortality rates (MMR) and infant mortality rates (IMR) (Coco, Giannone, & Zarbo, 2014).

The family is expected to act as the closest support system for pregnant women because in the family there is a strong emotional to help care for the mother during her pregnancy, including in detecting abnormalities and danger signs. Early detection of symptoms and danger signs during pregnancy is the best effort to prevent the occurrence of serious disruption to pregnancy and maternal safety (Jones, Winslow, Lee, Burns, & Zhang, 2011). Conduct early recognition of risk factors in pregnancy and childbirth as far as possible by pregnant women themselves, their husbands and families (Rochjati, 2011).

## **METHOD**

In this study the research design used was observational analytic. With cross sectional. The population and sample are pregnant women. Samples were taken using simple random sampling. The independent variable is the factors that influence behavior while the dependent variable is the behavior of pregnant women. The sample size is 30 respondents by randomly selecting respondents from the view data of pregnant women who pregnancy checkup at PMB Ika Mardiyanti in June-August 2019, with inclusion criteria for pregnant women who all gestational ages and willing to do research. Data collection is done directly / primary data, and analyzed by linear Regression.

## RESULT

From the data collection 30 respondents were obtained, which are presented in the table below.

Table 1. Frequency Distribution by Age in Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Age (years)	Frequency	Percentage (%)
Low risk (20-35)	17	56.7
High risk (< 20 / > 35)	13	43.3
Total	30	100

Source: Primary data, 2019

Table 1 shows that most maternal mothers are at low risk. Based on the results of cross tabulation between the ages of pregnant women with behavior it was found that out of 17 pregnant women who were at low risk most of the (64.7%) behavior was not achieved, while of 13 pregnant women at high risk were mostly (53.8%) behavior not achieved in early detection of high risk pregnancy. Statistical test results showed that the P value (0.821) > 0.05, which means there is no relationship between age and behavior of pregnant women.

Table 2. Frequency Distribution Based on Education for Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Education	Frequency	Percentage (%)
Basic	2	6.7
Intermediate	25	83.3
Height	3	10.0
Total	30	100.0

Source: Primary data, 2019

From table 2 it is found that almost all of them have secondary education. The results of cross-tabulation between education and behavior were obtained from two pregnant women with full primary education (100%) whose behavior was not achieved, while from 25 pregnant women with secondary education the majority (64%) behavior was not achieved, from three pregnant women who had education total height (100%) behavior is achieved in the early detection of high-risk pregnancies. Based on statistical tests it was found that the P value (0.0029) = 0.05, which means there is a relationship between education and the behavior of pregnant women.

Table 3. Frequency Distribution Based on Income of Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Revenue	Frequenc y	Percentage (%)
Enough	24	80.0
Height	6	20.0
Total	30	100.0

Source: Primary data, 2019

From table 3, almost all pregnant women (80%) have enough income. The results of cross tabulation between income and behavior were obtained from 24 pregnant women who had sufficient income in their family. Most (70.8%) behavior was not achieved, while from six pregnant women who had high income in their families almost entirely (83.3%) behavior achieved in the early detection of high risk pregnancy. Based on statistical tests found that the value of  $P(0.026) = 0.05$ , which means there is a relationship between income with the behavior of pregnant women.

Table 4. Frequency Distribution Based on Experiences of Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Experience	Frequency	Percentage (%)
Never been	12	40.0
Never got	18	60.0
Total	30	100.0

Source: Primary data, 2019

From table 4, it was found that most (60%) experienced early detection of high-risk pregnancies. The results of cross tabulation between experience and behavior were obtained from 12 pregnant women who had almost no experience (91.7%) of their behavior was not achieved, while from 18 experienced pregnant women most (61.1%) behavior was achieved in early detection of risk pregnancy high. Based on statistical tests found that the value of  $P(0.007) = 0.05$ , which means there is a relationship between experience with the behavior of pregnant women.

Table 5. Frequency Distribution Based on Knowledge of Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Knowledge	Frequency	Percentage (%)
Less	8	26.7
Enough	19	63.3
Good	3	10.0
Total	30	100.0

Source: Primary data, 2019

From table 5 it is found that the majority (63.3%) of pregnant women have sufficient knowledge. The results of cross tabulation between knowledge and behavior obtained data from *eight* pregnant women who lacked knowledge of all (100%) behavior was not achieved, while of 19 pregnant women who had sufficient knowledge most (52.6%) behavior was not achieved, from *three* pregnant women who have a good overall knowledge (100%) of their behavior is achieved in the early detection of high risk pregnancies. Based on statistical tests found that the

value of  $P(0.002) = 0.05$ , which means there is a relationship between knowledge and behavior of pregnant women.

Table 6. Frequency Distribution Based on Media Exposure to Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Media Exposure	Frequency	Percentage (%)
Never	12	40.0
Poster	10	33.3
Leaflet	8	26.7
Total	30	100.0

Source: Primary data, 2019

From table 6 it is found that almost half (40%) have never been exposed to the media. The results of cross tabulation between media exposure with behavior were obtained from 12 pregnant women who had never been exposed to the media entirely (40%). Based on statistical tests found that the value of  $P(0,000) = 0.05$  which means there is a relationship between media exposure with the behavior of pregnant women.

Table 7. Frequency Distribution Based on Behavior in Pregnant Women at PMB Ika Mardiyanti Sidoarjo, 2019

Behavior	Frequency	Percentage (%)
Not reached	18	60.0
achieved	12	40.0
Total	30	100.0

Source: Primary data, 2019

From table 7 it is found that the majority (60%) of behavior in the early detection of high risk pregnancies is not achieved. To make a multivariate model a bivariate analysis is done by looking at the value (likelihood ratio) if it has a  $P < 0.25$  then the variable can be included in the multivariate model. Based on the value of the likelihood ratio only five variables (income, experience, education, knowledge and media exposure) are eligible to be included in the multivariate model. Through the Variable in the Equation table, the probability value (p-value) of the parameter significance can be seen in the Sig. Column, where p-values smaller than the predetermined significance level (0.05) can be interpreted that the predictor variables in question have a significant influence significant to the response variable. It can be seen that partially, the five independent variables have no significant effect on behavior ( $P > 0.05$ ).

## DISCUSSION

Age is one of the physiological factors that can directly affect the process of pregnancy. Based on the data in Table 1, the majority (56.7%) of respondents are in the low risk age group, where

this age is the productive age and the right time to get pregnant and give birth. This means that the majority of respondents are in a healthy and safe (no risk) reproductive age of 20-35 years, which at that age is the productive age. At a healthy reproductive age most women can undergo pregnancy, childbirth, and childbirth in optimal conditions so that the mother and baby are healthy (Sarwono Prawihardjo, 2010). Age 20-35 years old female reproductive organs have developed and function optimally so that it will reduce various risks during pregnancy (Holness, 2018). According to (Sarwono Prawihardjo, 2010) pregnant women included in the category of high risk factors include the age of the mother is too young or old and often give birth or have never given birth or have just given birth once. According to (Sinsin, 2007) causes of maternal death from reproductive factors include maternal age / maternal age. In the healthy reproduction period it is known that the safe age for pregnancy and childbirth is 20-30 years. Maternal deaths in pregnant and childbearing women under the age of 20 are in fact two to five times higher than maternal deaths that occur at the age of 20 to 29 years. Maternal deaths increase again after the age of 30 to 35 years. The age of a woman during pregnancy should not be too young and not too old. The existence of a pregnancy with the risk of pushing a mother will choose to make the decision to detect early high-risk pregnancies so that the health condition of the mother and baby can be monitored properly. Income shows that almost all (80%) respondents have a sufficient level of income. According to researchers income shows financial income to meet the daily needs of households in the community, specifically with the existence of funding, a person will be able to take advantage of existing health facilities such as treatment, control in order to be able to maintain the health of pregnant women. This income is very influential on family behavior including pregnant women.

According to (Wijayanti, 2017) the lack of community participation in early detection of high risk of pregnancy is due to low levels of education and knowledge, low income and unsupportive behavior. The respondents' experience from the research results showed that the majority (60%) of respondents had experience about risky pregnancies. In this case the researchers assume that most respondents consider themselves experienced in previous child pregnancies and based on the experience of others who have already been pregnant and give birth. And based on interviews with respondents with risk parity with ANC visits not according to the standard, it is assumed that there is no need to routinely carry out pregnancy examinations after all to be able to bear children safely. This includes making early detection of high risk pregnancies.

The results of the study showed that the majority (63.3%) of respondents had a sufficient level of knowledge related to high risk pregnancies. Pregnant women with higher education will easily receive information about antenatal care. Therefore, a highly educated pregnant woman will be more receptive to information and willing to make antenatal care visits on an ongoing basis (Notoatmodjo, 2012). Education is one way for pregnant women to receive knowledge about antenatal care, with high education and good knowledge will make it easy for pregnant women to receive information and make regular antenatal visits. Pregnant women who are highly educated will check their pregnancy appropriately in order to maintain the state of health of herself and the child in her womb.

Based on the results of this study that the majority (63.3%) of respondents have a sufficient level of knowledge related to high risk pregnancies. According to Notoatmodjo (2010), knowledge is the result of knowing, and this happens after people have sensed a certain object. Sensing occurs through the human senses, namely the sense of sight, hearing, smell, taste and touch. Most of human knowledge is obtained through the eyes and ears. While behavior according to Skinner in (Notoatmodjo, 2003) that behavior is a person's response (organism) to a stimulus or object related to illness and disease, the health service system, food, and drinks, and the environment. According to (Notoatmodjo, 2012) health behavior is grouped into two namely healthy behavior and sick behavior.

Antenatal care visits by pregnant women can be grouped into healthy behaviors or healthy people's behavior to stay healthy and improve. The behavior of pregnant women in conducting antenatal care visits is influenced by a person's health beliefs. The influencing factors are explained in namely the HBM (Health Belief Model) theory. HBM (Health Belief Model) is used to identify several important priority factors that have an impact on behavior (Chuang, Velott, & Weisman, 2010).

In this research, it is known that almost half (40%) of respondents have never been exposed to media related to high risk pregnancy. Media information about the detection of high risk of pregnancy owned by respondents is almost balanced between the information media and leaflets. Information can affect a person's knowledge (Dewi, 2017). Someone who can access a lot of information has better knowledge than someone who accesses a little information media (Notoatmodjo, 2012).

Information about high-risk pregnancies provided by health workers as well as print or electronic media, will increase the knowledge of pregnant women about the importance of early detection of high-risk pregnancies so as to encourage mothers to do so (Astuti, 2018). Respondents obtained information about high-risk pregnancies from posters or leaflets provided at puskesmas, as well as electronic media, and counseling by health workers. The role of health workers in providing information about high risk pregnancies is very important (Widarta, Cahya Laksana, Sulistyono, & Purnomo, 2015). This is consistent with (Pell et al., 2013) research that the role of government in providing information about high risk pregnancies is very helpful for pregnant women to obtain better information.

Human behavior occurs through a stimulus-organism-response process. The behavior in question is the behavior of pregnant women in the early detection of high risk pregnancies in which behavior is associated with factors of age, education, income, knowledge, experience and media exposure. In complex or diverse family and cultural environments. In fact the role of husband and family also influences pregnant women in supporting the behavior or actions of pregnant women in utilizing health services (Mardiyanti, Nursalam, Devy, & Ernawati, 2019a). A person's health behavior is determined, among others, by the presence or absence of support from the surrounding community (social support) (Baron et al., 2017).

People who live in an environment that upholds health aspects will be more enthusiastic in maintaining their health. Conversely those who live in an unhealthy lifestyle / not paying attention to health will tend not to care about disease prevention or regular health checks. The degree of maternal and child health needs to be improved, so in an effort to improve the holistic and integrative approach which is not only limited to the medical field, but also economic, educational and socio-cultural aspects (Juariah, 2018).

## CONCLUSION

The age of pregnant women is mostly in the low risk group, almost all pregnant women have a secondary education level, almost all the families of pregnant women have sufficient income levels, most pregnant women have had experience of risky pregnancies, most pregnant women have a sufficient level of knowledge related to risk pregnancy high knowledge, nearly half of pregnant women have never been exposed to media related to early detection of high risk



pregnancies. There are no factors that significantly influence the behavior of pregnant women in early detection of a high risk of pregnancy in PMB Ika Mardiyanti.

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