



## The Influence of Various Intrapersonal Factors of Pregnant Women on Efforts to Prevent the Occurrence of Maternal Death Risk

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### ABSTRACT

Indicators of maternal health services aimed at reducing maternal mortality include prenatal checks, deliveries by health services, and deliveries assisted by qualified health personnel. The purpose of pregnancy checks is to detect pregnancy disorders that can harm the mother and her fetus. Deliveries to health facilities include health centers, clinics, maternity wards, health workers and hospitals. The purpose of this study was to examine the effect of intrapersonal characteristics of pregnant women on efforts to prevent maternal mortality risk by using cross-sectional quantitative methods using primary and secondary data. The sample was 34 intrapersonal pregnant women who were sent questionnaires for 2020 data collection in Konawe Regency, where the maternal mortality rate is still high. The research locations were the Asinua Health Center and Anggalomoare Health Center because maternal deaths in childbirth are more widespread. Five intrapersonal characteristics of pregnant women were analyzed. Inferential analysis (Fisher's exact probability test) was used in this study. Maternal mortality risk prevention interventions are influenced by several intrapersonal factors, including the presence of pregnancy risk markers, maternal barriers to health services, satisfaction with midwifery services, as well as knowledge and attitudes about pregnancy risk markers

## INTRODUCTION

The results of POGI and EMAS perinatal examinations for mothers in 11 public hospitals and one private hospital in 6 provinces of Indonesia revealed the following problems: 31% experienced delays in patient referrals, only 9% of patients were referred, adequate patient stabilization before being referred, 53% of patients experienced inappropriate clinical decisions, 47% delayed delivery/surgery, 47% experienced follow-up errors, 70% of deaths could have been prevented, only 26% of patients died within 6 hours of arriving at the hospital and the remaining 74% of patients died after Golden Age (Ministry of Health, 2018).

Indicators of maternal health services aimed at reducing maternal mortality include prenatal checks, deliveries at health facilities and deliveries assisted by qualified health personnel (Ministry of Health, 2015). The purpose of prenatal care is to identify all pregnancy disorders that can harm the mother and her uterus. Traditionally, prenatal care has been an important intervention in reducing the risk of maternal morbidity and mortality (Champbell, 2006); (Shimkhada, 2008).

Deliveries performed in health institutions include health centers, clinics or maternity wards, health workers' practices and hospitals (Ministry of Health, 2015). Delivery in health facilities is one of the key factors in reducing maternal mortality. It is important to ensure that mothers give birth in the right places where life-saving equipment and hygienic delivery conditions help mothers avoid the risk of complications that can cause maternal morbidity and death (Kesterton, 2010).

Deliveries assisted by qualified health personnel include general practitioners, obstetricians, midwives and trained nurses. The Ministry of Health has ordered that deliveries must be assisted by qualified health workers (President of the Republic of Indonesia, 2017). This is intended to achieve the Sustainable Development Goals (SDG) goal of reducing global maternal mortality to less than 70 per 100,000 live births by 2030. Limited access is one of the factors causing these services to not be provided optimally. Some of the problems faced by women in accessing information and health care are problems seeking care, costs (15%) and distance to health facilities (11%), and the absence of a partner during treatment (26%) (BKKBN, BPS, Ministry of Health and USAID, 2018).

Based on the empirical data above, the problem of maternal mortality in Southeast Sulawesi Province, especially Konawe Regency, must be handled quickly and appropriately. This should receive priority in handling, because maternal mortality is a very sensitive indicator of the success of health work and as an indicator of community welfare. The results of the SDKI in Konawe Regency (2017) are: The percentage of deliveries in health care facilities is 48.4%. The coverage of deliveries by health personnel at health facilities in 2017 decreased (83.02%) compared to 2014 (88.81%). The ratio of births by place of birth from the 2013 Riskesda showed that more mothers gave birth at home and in other places (65.67%), other than in delivery rooms, counseling centers, health centers, Pustu,

Polindes and Poskesdes. Obstetricians are still responsible for 11.8% of non-medical deliveries, 0.3% of deliveries by nurses, and as much as 0.8% of single births (without an obstetrician) (Southeast Sulawesi Provincial Health Office, 2018). The formulation of the problem posed is: What factors influence efforts to prevent the risk of maternal death?

Socio-ecological modeling develops a framework for the fact that different levels and strata of society (family, community, work and residential environment, city and state politics) influence the behavior of individuals, families and communities, resulting in disease and health problems (Kenagi, 2010), (Whiteley, 2011). Health promotion activities have three main objectives, namely changes in individual behavior, community conditions, the environment, and changes in political developments that support individual and community behavior and health that can be achieved (World Health Organization, 2011).

### **THEORITICAL FRAMEWORK**

The socio-ecological approach to health arises from the view that the risk factor approach to individuals that protects and promotes personal health problems must be analyzed within the contextual framework and structural policies that cause it to occur (Surjadi, 2012). The development of a socio-ecological model of health is a framework for health improvement efforts that can only be achieved by focusing on social and environmental factors combined with biological and medical factors (Whiteley, 2011).

The socio-ecological model is a holistic approach to public health that aims not only to study individual risk factors, but also aspects of norms, beliefs, and socioeconomic systems. There are two key concepts in this approach, namely the influence of behavior and the influence of tiered conditions (levels). Behavior formed by the social environment shows a reciprocal causal relationship. The socio-ecological model is used to analyze health behavior. This model provides a very useful framework for better understanding the drivers and barriers to healthy behavior. A strategic program plan can be proposed as an innovative effort to change the behavior of pregnant women to prevent the risk of maternal death in Konawe District, Southeast Sulawesi Province with reference to several existing programs. With a socio-ecological approach, all levels must be achieved, starting from the individual, interpersonal relationships within the family, through the community level to the social level from a political perspective (Sumarni, 2017).

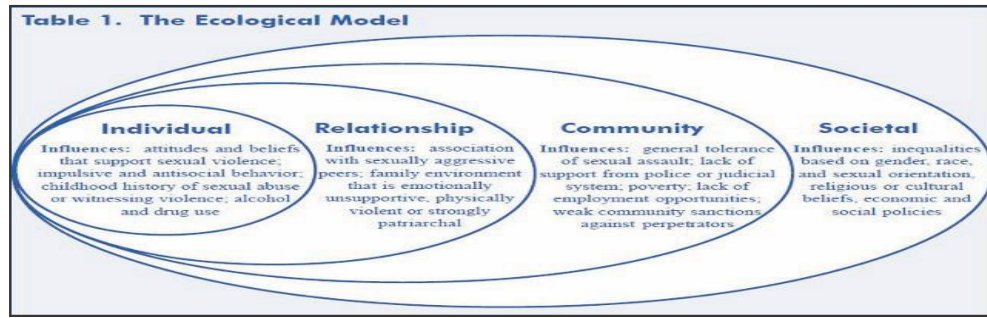


Figure 1. Theoretical Framework of the Socio-Ecological Model of the Behavior of Pregnant Women

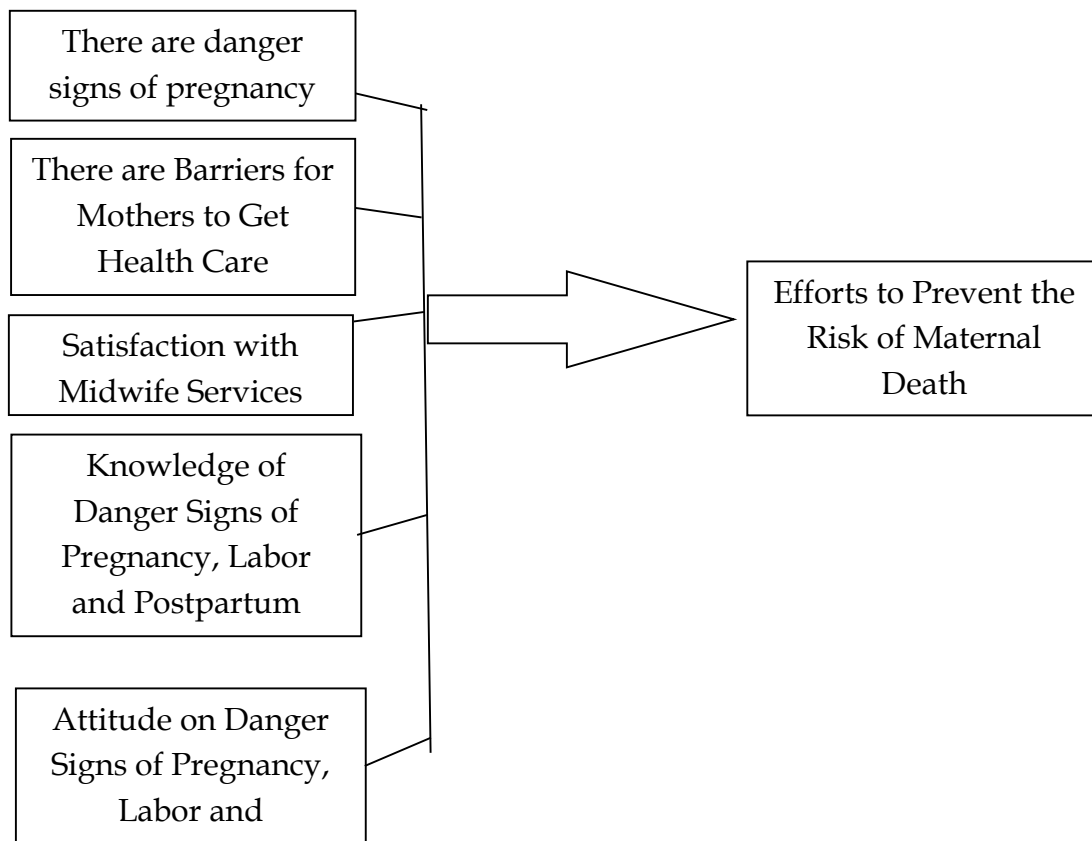


Figure 2. Research Concept Framework

**The hypothesis of this study is:** There is influence of various intrapersonal factors of pregnant women on efforts to prevent the risk of maternal death.

**METHODS**

This research was conducted quantitatively with a cross sectional research design. Data collection includes primary data and secondary data which are intrapersonal data of pregnant women, including: There are danger signs in pregnancy, mothers have obstacles in accessing health services, knowledge and attitudes about danger signs during pregnancy, childbirth and postpartum, and mother's satisfaction with midwifery services. Thirty four (34) intrapersonal pregnant women served as sample. This research was conducted in Konawe Regency which is a Southeast Sulawesi Province which has a high maternal

mortality rate and is easier to reach than other districts. Researchers have limited time, manpower and funds to study the whole area of Konawe Regency which is very large and has 27 Community Health Centers. With these limitations, the researchers collected data only from two working areas of the Public Health Center, namely the Asinua Health Center and Anggalomoare Health Center, which were very far from each other based on data from the Health Work Area from the Konawe District Health Office regarding the higher distribution of maternal deaths. Data processing is done with Microsoft Excel and data analysis with R Studio. For inferential analysis, Fisher's exact probability is used with the following formula:

Table 1. Fisher's Exact Probability Formula

<u>Variabel</u>	<u>Kelompok</u>		<u>jumlah</u>
	1	2	
<u>Diatas median (+)</u>	A	B	A+B
<u>Dibawah median (-)</u>	C	D	C+D
<u>Jumlah</u>	A+C	B+D	N

$$p = \frac{\binom{A+C}{A} \binom{B+D}{B}}{\binom{N}{A+B}} = \frac{[(A+C)!/A!C!][(B+D)!/B!D!]}{N!/[(A+B)!(C+D)!]}$$

Sehingga menjadi,

$$p = \frac{(A+B)!(C+D)!(A+C)!(B+D)!}{N!A!B!C!D!}$$

## RESULTS

Based on the results of data collection, it was processed and analyzed with conclusions using the Fisher Exact Probability Test on 34 pregnant women who were respondents, variables were classified on a nominal scale with cells where the observed value was zero and/or the expected value was less than 5. The results obtained in the study this as follows:

Table 2. Distribution of the Presence of Danger Signs in Pregnancy Against Efforts to Prevent the Occurrence of the Risk of Maternal Death

Danger Signs In Pregnancy	Efforts to Prevent the Occurrence of the Risk of Maternal Death				Amount	%	P	$\alpha =$ 0,05
	Yes		No					
	n	%	n	%				
Has a Danger Sign	4	80	1	20	5	14,71	0,011	
Has No Danger Signs	5	17,24	24	82,76	29	85,29		
Total	9	26,47	25	73,53	34	100		

The analysis was performed using the Fisher Exact Probability Test for nominal scale variables and yielded a P value of 0.011, less than  $\alpha = 0.05$ . This interpretation rejects the null hypothesis, so that the danger signs of pregnancy in pregnant women affect efforts to prevent the risk of maternal death.

Table 3. Distribution of Obstacles for Mothers to Get Health Care Against Efforts to Prevent the Occurrence of the Risk of Maternal Death

There are Barriers for Mothers to Get Health Care	Efforts to Prevent the Occurrence of the Risk of Maternal Death				Amount	%	P	$\alpha =$ 0,05
	Yes		No					
	n	%	n	%				
No Barriers	10	52,63	9	47,37	19	55,88	0,017	
There is a Barrier	2	13,33	13	86,67	15	44,12		
Total	12	35,29	22	64,71	34	100		

The analysis was carried out using the Fisher Exact Probability Test with a nominal scale variable and yielded a P value of 0.017 which is less than  $\alpha = 0.05$ . Interpretation must reject the null hypothesis, thus efforts to prevent the risk of maternal death are hampered by barriers to access of mothers to health services.

Table 4. Distribution of Mother's Satisfaction in Midwife Services Against Efforts to Prevent the Occurrence of Maternal Death Risk

Mother's Satisfaction with Midwife Services	Efforts to Prevent the Occurrence of the Risk of Maternal Death				Amount	%	P	$\alpha = 0,05$
	Yes		No					
	n	%	n	%				
Satisfied	25	83,33	5	16,67	30	88,23	0,031	
Not satisfied	1	25	3	75	4	11,76		
Total	26	82,35	8	17,65	34	100		

The analysis was carried out using the Fisher's Exact Probability Test on nominal scale variables and gave a P-value of 0.031 which is less than  $\alpha = 0.05$ . This interpretation must reject the null hypothesis, thus maternal satisfaction with midwifery services has implications for efforts to prevent the risk of maternal death.

Table 5. Distribution of Knowledge of Pregnant Women about the Danger Signs of Pregnancy, Labor and Postpartum Against Efforts to Prevent the Occurrence of the Risk of Maternal Death

Knowledge of pregnant women	Efforts to Prevent the Occurrence of the Risk of Maternal Death				Amount	%	P	$\alpha = 0,05$
	Yes		No					
	n	%	n	%				
Good	15	100	2	0	17	44,12	0,00	
Not enough	4	31,58	13	68,42	17	55,88		
Total	19	61,76	15	38,23	34	100		

Analysis was performed using the Fisher's Exact Probability Test for ordinal nominal scale variables and yielded a P value of 0.00 less than  $\alpha = 0.05$ . This interpretation rejects the null hypothesis, so that the mother's knowledge of the danger signs of pregnancy, labor and delivery influences efforts to prevent the risk of maternal death.

Table 6. Distribution of Attitudes of Pregnant Women on Danger Signs of Pregnancy, Labor and Postpartum Against Efforts to Prevent the Occurrence of the Risk of Maternal Mortality

Attitude of Pregnant Women	Efforts to Prevent the Occurrence of the Risk of Maternal Death				Amount	%	P	$\alpha = 0,05$
	Yes		No					
	n	%	n	%				
Support	23	88,46	3	11,54	26	76,47	0,008	
Does not support	3	37,5	5	62,5	8	23,53		
Total	26	76,47	8	23,53	34	100		

Analysis was performed using the Fisher Exact Probability Test for ordinal nominal scale variables and yielded a P value of 0.008, less than  $\alpha = 0.05$ . This interpretation rejects the null hypothesis, thus the attitude of pregnant women has implications for efforts to prevent the risk of maternal death.

## DISCUSSION

Table 1 shows that almost all mothers with danger signs during pregnancy try to prevent the risk of maternal death (80%). Almost all mothers who did not show signs of a dangerous pregnancy did not try to prevent the risk of maternal death (82.76%). Based on the Fisher's Exact Probability Test, pregnancy danger signs affect efforts to prevent the risk of maternal death ( $P=0.001$ ).

Table 2 illustrates that mothers who do not have barriers to health services are more trying to prevent the risk of maternal death (52.63%). Of the mothers who had difficulty accessing health services, almost all of them did not try to prevent the risk of maternal death (86.67%). Based on the Fisher Exact Probability Test, the absence of barriers for mothers to access health services had an impact on efforts to prevent the risk of maternal death ( $P=0.017$ ). Fifteen (15) mothers struggle to get medical treatment. The obstacle was that mothers had to get permission from their husbands before they could seek treatment (46.67%). Mothers also do not want to seek treatment alone if no one accompanies them (33.33%). Another obstacle is the distance from the mother's house which is quite far from the puskesmas (20%).

Table 3 shows that mothers who are satisfied with the midwife's services show their efforts to prevent the risk of maternal death (83.33%). Mothers who were dissatisfied with midwife services did not try to prevent the risk of maternal death (75%). Based on the Fisher Exact Probability Test, midwifery service satisfaction had an effect on efforts to prevent the risk of maternal death ( $P=0.031$ ).

Table 4 shows that mothers with good knowledge all try to prevent the risk of maternal death (100%). Mothers who do not have information about the danger signs of pregnancy, most do not try to prevent the risk of maternal death (68.42%). Based on the Fisher's Exact Probability Test, knowledge of pregnant

women about the danger signs of pregnancy, childbirth and the puerperium had an effect on efforts to prevent the risk of maternal death ( $P=0.00$ ).

Ta bell 5 shows that the attitudes of mothers who support the prevention of the risk of maternal death are almost all efforts to prevent the risk of maternal death (88.46%). Mothers who do not support prevention of the risk of maternal death are more likely to be at risk for the possibility of maternal death (62.5%). Based on the Fisher Exact Probability Test, the mother's attitude influences efforts to prevent the risk of maternal death ( $P=0.008$ ).

Antenatal Examination (ANC) is a visit by a pregnant woman to a midwife or doctor as soon as possible after feeling pregnant to get prenatal care services. At each ANC visit, the attending physician collects and analyzes information about the mother's condition, using the history and physical examination, to diagnose intrauterine pregnancy and determine if there are any problems or complications. ANC is a pregnancy examination that optimizes the mental and physical health of pregnant women in order to be able to face childbirth, the postpartum period, prepare for breastfeeding and adequately restore reproductive health. Pregnancy examination is a physical and mental examination of a pregnant woman that protects the mother and fetus during pregnancy, childbirth and postpartum, so that the postpartum state is healthy and normal not only physically but also mentally (Sumarni, 2017).

The purpose of fetal screening is to ensure that pregnant women have healthy and safe pregnancies, labor and postpartum and give birth to healthy children. Routine examinations and regular monitoring by midwives and doctors during pregnancy are expected to prevent and overcome complications that may arise during pregnancy, such as anemia, malnutrition and high blood pressure, as well as sexually transmitted diseases, including other common diseases. This can reduce the risk of maternal and child mortality. Pregnant women who do not control their pregnancies are included in the high-risk group which can put themselves at risk (Supliyani, 2017).

High-risk pregnant women are pregnant women who have greater risk or danger during pregnancy or childbirth compared to normal pregnant women. Pregnant women who are included in the high risk category are: mothers with a height of less than 145 cm, the shape of the mother's pelvis is not normal, pale, thin body, mother's age is less than 20 years or more than 35 years, the number of children is more than 4 people, the distance births less than 2 years apart, possible difficulties with previous pregnancies or births, frequent miscarriages, severe headaches, leg swelling and bleeding during pregnancy and amniotic fluid discharge during pregnancy. High risk pregnancy is a pathological pregnancy that can have a negative impact on the condition of the mother and fetus. To save the mother and fetus during pregnancy, labor and postpartum, proactive and preventive actions are needed (Syahda, 2018).

Pregnant women usually don't talk to their neighbors about how to prevent maternal death in high-risk pregnant women. Pregnant women also lack communication with their families (siblings/in-laws/parents) about how to prevent the death of high-risk pregnant women. Pregnant women should discuss with their husbands how to prevent maternal death in high-risk pregnancies.

Pregnant women also need to communicate with health workers and cadres about how to prevent maternal death in high-risk pregnant women (Musdalifa, 2020).

Public awareness to check pregnancy regularly and continuously is still low. This is consistent with the results of research conducted in Garut, Sukabumi and Ciamis which showed that the reason mothers did not carry out routine checks at least four visits was related to cost factors (services and transportation) and limited access to health facilities in health services and distance to health services and bad road conditions. Studies conducted in Ethiopia showed that distance and travel time, diseases encountered during pregnancy, planned pregnancies, and husband's support had the greatest impact on utilization of antenatal care. Meanwhile, the results of research conducted in Nigeria concluded that urban and rural locations, religion and age of the mother determine the use of prenatal services (Supliyani, 2017).

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Midwives provide ANC services to pregnant women based on service standards. It's just that the examination room is not wide and sometimes the patient queue is too long because the midwife cannot come there, so the number of midwives who attend decreases. Midwives usually do not come there because it coincides with meetings being held elsewhere. Patients or clients who initially seek treatment at the Puskesmas to check their pregnancy then move to other health services. Usually they only visit the Puskesmas until the second or third visit. Then they decided not to continue the visit to the Pukesmas. Pregnant women sometimes drop out of ANC visits or discontinue visits for various reasons, such as geographic location or gestational age, and then move on to check for their pregnancy elsewhere. As a result, health workers cannot monitor K-4 visits which are called terminations or DOs (Faich Carissa Fauziah, 2012).

Most pregnant women live quite far away. As their pregnancy progressed, they decided to change visits to other health services closer to where they lived. Several mothers also said that they could not go to the Puskesmas because there was no one to accompany them. Their husbands do not have time to accompany pregnant women in the morning or during the day, while the Puskesmas is closed in the afternoon and at night. Puskesmas seeks to improve the quality of ANC services. There is hope that the quality of ANC services will improve, for example through adequate facilities, comfortable service rooms and midwives and nurses who are ready to understand the needs of pregnant women, who monitor their

pregnancies here from the start. It is hoped that pregnant women will continue to use the services of Puskesmas health workers, even though they have to go through a difficult journey. This is targeted to eliminate drop out rates (Faich Carissa Fauziah, 2012).

There is a significant relationship between distance and travel time to obstetric visits. Long distances are the reason why mothers do not carry out pregnancy checks at health facilities according to the minimum requirements. The distance between pregnant women's homes and health facilities is a major problem in Indonesia, which causes rare visits to midwives. Long distances are also affected by road conditions that must be traversed. Steep road conditions and footpaths will affect the travel time required to reach the service area. Even though the distance to the service area is relatively close, the steep road conditions can make mothers reluctant to do routine pregnancy checks. Long distances reduce the mother's interest in ANC services. Road conditions and the availability of public transportation affect the use of health facilities for ANC services. Ojek is the mother's preferred mode of transportation, but because many village roads are uphill and there are still many winding and rocky roads, mothers are reluctant to have their pregnancy checked (Supliyani, 2017).

Access is the convenience for people who need health services to be able to access health services. Ease of access to health services depends on several factors such as distance from home and travel time to health services, as well as socioeconomic and cultural status. Inequality in access to and use of health services causes health inequality. Ideally, everyone has fair access to the best health possible and is not disadvantaged in accessing health services. Communities with different socio-economic statuses must receive the same health services, including equal access to health services, according to their needs. Equity in certain health services requires the allocation of resources and the availability of health services according to health needs (Sumarni, 2017).

The limited availability of services is the reason for mothers not to routinely carry out pregnancy checks to health workers. Especially in villages where the road conditions are bad and mothers have to walk for up to two hours to reach the nearest puskesmas. This condition is exacerbated during the rainy season because the roads are slippery, making women reluctant to carry out ANC checks. Lack of access can be a barrier for mothers to carry out routine and continuous pregnancy checks. A similar study was also found in Pakistan which showed that the main reason for mothers not having prenatal checks was that the puskesmas was far from where they lived and transportation was difficult. The pregnancies of women who live near service facility areas can be monitored regularly compared to mothers who live far from service facilities. Pregnant women with difficult access to services often experience irregular antenatal checks compared to pregnant women who are easy to reach from service facilities (Supliyani, 2017).

The results of this study are also in line with research conducted in Afghanistan which found that cost is an obstacle for families to access health services. The cost factor is still an obstacle in providing health services to those who need them. Perceived high costs refer to the costs that families have to incur

to access health services. Families with late referrals tend to be families who consider hospital care costs to be expensive or high. Decision making is mostly done by the family, especially women's families. The family controls the decision-making process to refer the mother to health services. This shows that the mother does not have the power to make decisions in the family, even when it comes to matters that affect the safety of her soul. Decisions about taking mothers to the hospital are often influenced by the culture of deliberation that develops in society. The decision to take mothers to the hospital can also be delayed due to the family's ignorance of danger signs that should require immediate treatment. Apart from the mother, her family, especially the main decision makers, must understand the danger signs of pregnancy, childbirth and the puerperium. The aim is to assist mothers in treatment and care to prevent delays in referrals which can result in death for both the mother and the baby she is carrying (Rahmawati, 2013).

Women's independence has a huge impact on their health. Women who work and are independent can easily fulfill their wishes for health checks, especially during pregnancy and childbirth. The family's financial situation plays a very important role in the decision to use health services. Families with high economic status usually pay more attention to health problems, pregnancy and childbirth, so they always try to seek help from health services when they are sick or need services. Conversely, families with low economic status prefer traditional services such as traditional birth attendants who will help mothers give birth. The family's financial situation is related to decision making when requesting and receiving health care. In families of low economic status, the desire for professional health care is not a priority. Families think of more ways to be able to meet their daily needs (Hatini, 2018).

Availability of facilities plays a role in increasing knowledge. Availability of facilities and knowledge can play a role in getting husband's support. Availability of facilities, husband's knowledge and support influence the midwife's role. Availability of facilities, knowledge, husband's support and the role of midwives influence perceptions. Availability of facilities, knowledge, husband's support, midwife's role and perception contribute to utilization Program Perencanaan Persalinan (P4K) to prevent complications in pregnant women (Deby Anggrisa Monika, 2021).

The estimated number of high-risk pregnancies in this region is 20%. More comprehensive coverage of at-risk pregnant women means that all at-risk pregnant women can be identified so that action can be taken to prevent possible deaths. However, if the coverage is less than 20%, it means that there are likely to be high-risk pregnant women who go undetected so that they have the opportunity to cause maternal death. There are several pregnant women classified as high risk who require referral to medical services. Pregnant women need information to understand the risks associated with their pregnancy. If pregnant women diligently check themselves at the puskesmas from the start, they can identify the possibility of a high-risk pregnancy as early as possible. Health workers can continue to monitor the mother's health. Sometimes new mothers find out about their high-risk pregnancies after visiting a health center.

Pregnant women who check themselves at the Puskesmas receive simple information on how to identify high-risk pregnancies. Counseling should be done frequently so that people can know and participate in preventing maternal deaths. Puskesmas often encounter pregnant women who are not aware of the risks of their pregnancy (Faich Carissa Fauziah, 2012).

The lack of information about high-risk pregnancies is due to the fact that not all midwives inform pregnant women during pregnancy checks. Midwives have the responsibility to know and identify pregnant women who are at risk and to monitor the development of the health of pregnant women because midwives are the spearhead of maternal health services. ANC services play a very important role in identifying high risk factors as quickly as possible to prevent illness and death. Lack of knowledge of mothers about high-risk pregnancies has an impact on the low coverage of high-risk pregnancies, which also has an impact on increasing maternal mortality. Information about the health and diseases of pregnant women that may be suffered by the mother during pregnancy can be conveyed through counseling and guidance when pregnant women visit health facilities to monitor their pregnancy or use ANC services (Faich Carissa Fauziah, 2012).

Mothers with low understanding of information will experience delays in referral due to pregnancy and acute complications. Lack of knowledge of mothers about pregnancy danger signs is a factor influencing referrals to inappropriate referral sites. This causes delays in accessing health services. Delay in bringing the mother can result in the death of the mother and child. Delays in referrals at the family level occur for two reasons: delays in identifying danger signs present in the mother's pregnancy and delays in making referral decisions. This shows the importance of knowing the signs of danger so that it is not too late to decide to save the mother's life (Rahmawati, 2013).

Good knowledge of mothers about danger signs of pregnancy must be able to identify maternal complications early to avoid delays in referrals which can cause death of mother and child. It is hoped that not only mothers, but also their family members, especially key decision makers, must have good knowledge about the danger signs of pregnancy. A study in Afghanistan found that knowledge influenced the availability of health services in the event of complications. Lack of knowledge of mothers and the community about danger signs can result in delays in bringing mothers to health services. To avoid delays in referrals, good mother knowledge is needed. This is because women know best what they are experiencing and therefore know best whether they should be taken to a health facility immediately or not (Rahmawati, 2013).

## **CONCLUSIONS AND RECOMMENDATIONS**

Various intrapersonal factors in pregnant women influence efforts to prevent the risk of maternal death. Various intrapersonal factors of pregnant women include: presence of danger signs of pregnancy, presence of maternal barriers to health services, satisfaction with midwifery services, knowledge and attitudes about danger signs of pregnancy. The five intrapersonal factors in pregnant women influence efforts to prevent the risk of maternal death when

tested with the Fisher's exact probability test. Mothers who try to take steps to prevent the risk of maternal death are mothers with danger signs of pregnancy. Mothers who do not have barriers to health services are more likely to try to prevent the risk of maternal death. Mothers who are satisfied with midwife services tend to try to avoid the risk of maternal death. Well-informed mothers are all interested in preventing the risk of maternal death. Attitudes of mothers who support the prevention of the risk of maternal death, almost all of them try to prevent the risk of maternal death.

Based on the conclusions presented above, the authors recommend that health workers, as well as mothers and families should be able to pay attention to various intrapersonal factors that arise during pregnancy to prevent the risk of maternal death. Husbands and families must be able to understand the condition of pregnant women in order to remove barriers for mothers to seek treatment. Health workers, especially midwives, must be able to provide the best possible service to pregnant women, because mothers who are satisfied with midwifery services, mostly try to prevent the risk of maternal death. Health workers, especially midwives, must be able to provide counseling or counseling to mothers to increase their knowledge about the danger signs of pregnancy. Likewise, mothers should be motivated to broaden their knowledge. With good knowledge about the danger signs of pregnancy, it is hoped that mothers can develop attitudes that support efforts to prevent the risk of maternal death. Realizing these expectations requires the role of an alert husband who cares about various intrapersonal factors of pregnant women.

#### **FURTHER STUDY**

Based on the 2018 "SRS" Sampling Registration System, approximately 24% of maternal deaths occur during pregnancy, 36% during childbirth, and 40% after delivery. More than 62% of maternal deaths occur in hospitals. High maternal mortality is caused by various risk factors that already exist in the pre-pregnancy stage, namely anemia, calorie deficit, obesity, other diseases such as tuberculosis and others. During pregnancy, the mother also experiences various complications such as high blood pressure, bleeding, anemia, diabetes, infection, heart disease, postpartum hemorrhage, eclampsia, infection, unsafe abortion, obstructed labor and other causes such as ectopic pregnancy and hydatidiform mole. The limitation of this study is that the researchers tried to consider the efforts of mothers to prevent death only in relation to the stage of pregnancy where this research was carried out in the community in the working area of the puskesmas. Researchers limited the scope of the study due to limited time, manpower and funds, making it impossible to examine all causes of death or all stages of maternal death (pregnancy, childbirth and postpartum). Researchers also cannot conduct comprehensive research at the district or provincial level.

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