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**KNOWLEDGE, ATTITUDE AND PRACTICE AMONG PRIVATE MIDWIFE IN EARLY  
DETECTION OF PRE-ECLAMPSIA ON PATIENTS IN SAMARINDA, EAST  
KALIMANTAN PROVINCE**

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<b>Keywords:</b>	<b>ABTRACT</b>
Knowledge, attitude, practice, pre-eclampsia, early detection, midwife	<i>A number of pregnant woman are affected by pre-eclampsia which occurs in the second half of pregnancy and are defined mainly by the symptoms of hypertension and proteinuria. The early detection for high risk to develop pre-eclampsia has the potential to be a predictive tool for other health disorders with meaningful consequences for the mother, their offspring and health care system. Midwives have their own role to their clients. This provides the basis that midwives should have good competence in detecting possible complications in their clients, especially in cases of pre-eclampsia. Objective; To describe the level of knowledge, attitude and practice among private midwife in early detection of pre-eclampsia on patients in Samarinda, East Kalimantan Province. Method; This research uses cross sectional quantitative design. A sample of 53 private midwives through cluster random sampling were selected for the study. Data was analyzed using univariate and bivariate through SPSS version 22. Results; There is a correlation between midwife demography factors such as age, length of service and maternal training followed by knowledge, attitude and practice of midwife in early detection of pre-eclampsia.</i>

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**INTRIDUCTION**

Preeclampsia/eclampsia is one of the 3 leading causes of maternal morbidity and mortality worldwide. During the past 50 years, there has been a significant reduction in the rates of eclampsia, maternal mortality, and maternal morbidity in the developed countries. In contrast, the rates of eclampsia, maternal complications, and maternal mortality remain high in the developing countries. These differences are mainly due to universal access to prenatal care, access to timely care, and proper management of patients with preeclampsia–eclampsia in the developed countries. In contrast, most of maternal deaths and complications are due to lack of prenatal care, lack of access to hospital care, lack of resources, and inappropriate diagnosis and management of patients with preeclampsia–eclampsia in the developing countries.

Preeclampsia/eclampsia is associated with substantial maternal complications, both acute and long-term. Clear protocols for early detection and management of hypertension in pregnancy at all levels of health care are required for better maternal as well as perinatal outcome. This is especially important in the developing countries {Ghulmiyyah, 2012 #30}

In poor countries, about 25-50% caused the death of childbearing age-related thing with pregnancy. The direct cause of death mother in Indonesia, as in other countries are bleeding, infection, and eclampsia (Saifuddin, 2007). With the percentage of bleeding around 60-70%, Pre-eclampsia, eclampsia 10-20%, and 10-20% infection (Sujiyatini, 2009).

Midwives as one of the health praticion have an important position and strategic in reducing MMR and IMR, providing continuous service and plenary, focusing on the aspect of prevention through health education and counseling, health promotion, aid normal delivery on the basis of partnership and empowerment of women as well as early detection in cases of referral. Midwives should be able to provide midwifery services in a professional manner through improved analytical capabilities and appropriate professional standards.

Pregnant women with preeclampsia is a serious problem because it can threaten death to both mother and fetus. Antenatal Care Program including preeclampsia detection can be done with pregnancy tests based on the standards that have been set. Midwives as professionals in maternal and child health services required to adhere to standard obstetric care. Compliance midwife implement obstetric care standards and have the leverage impact on the quality of antenatal care services provided, which in turn contributes to a decrease in morbidity and mortality in mothers and babies.

The purpose of this research is to determine the level of knowledge, attitude and practice (KAP) among private midwife in early detection of pre-eclampsia in Samarinda, East Kalimantan Province, to determine the quality of supervision by coordinator of midwives on the KAP on early detection of pre-eclampsia and to determine the relationship between demographic data of midwives' and KAP on early detection of pre-eclampsia.

The hypotheses of this research are there is a significant between knowledge and attitude to practice early detection of pre-eclampsia among private midwife in Samarinda.

## **METHOD**

The design of this research is quantitative cross sectional. Conducted at Samarinda, East Kalimantan Province, Indonesia. Target population in this research is private midwives in Samarinda, East Kalimantan, with the total 111 midwives. The sample size in this study is 53 respondents that calculated using the Yamane Formula (1967). The instrument was performed construct validity of obstetricians and gynecologists, Mr. Irfan Sp. OG (K) which then tested the validity using Cronbach's Alpha Test and obtain the results for knowledge questions 0.8, attitude questions 0.8, practice questions 0.9 and supervision by coordinator midwife 0.6.

The researchers applied for permission and conducted preliminary study in several places, among others, public hospital Abdul Wahab Syahrani, Samarinda Islamic Hospital, Kartika Jaya Clinic, BidanRamlahParjib Clinic, Private Midwife Practice Eli Nursanti, and Private Midwife Practice Indra Wahyuni. The researcher also proposed to conduct research to Indonesia Midwifery Association Branch of Samarinda City to obtain data of private midwife practice in Samarinda. The researchers also gained the data from the Samarinda Health Office regarding the practice of a private midwife with a legal practice license.

The technique used in collecting data is questionnaire are given directly to respondent that are arranged effectively. Researchers meet respondents at work, home and in the clinic.

Data analysis is done in univariate and bivariate Spearman Rank Correlation by using SPSS version 22. Analytical techniques such as: univariate, used to analyze existing variables descriptively by calculating the frequency distribution and proportion. Bivariate analysis, consists of analysis of tables or crosstabs and relationship analysis. To look for the relationship between two variables, then tested its normality with Kolmogorov test Smirnov. Based on the normality test, the results obtained that all variables are distributed normal, so use Spearman's correlation test. To know the closeness of the relationship then seen in the amount of coefficient correlation with the guideline that is if the coefficient increasingly approaching 1 or -1 then the relationship is close or strong, whereas if the coefficient is getting close to 0 then the relationship is weak.

## RESULT AND DISCUSSIONS

### Result

The results of this study are illustrated from the following tables:

**Table 1. Frequency Distribution Age of Respondents**

Age	Frequency	Percent
21-35 years old	18	34
36-56 years old	33	62.3
> 56 years old	2	3.7
	53	100

Respondents aged 21-35 years as many as 18 people (34%), 36-56 years as many as 33 people (62.3%), and respondents aged > 56 years, only 2 (3.7%).

**Table 2. Frequency Distribution of Maternal Emergency Training of Respondents**

Maternal Emergency Training	Frequency	Percent
Never Follow	18	34
Ever Follow	35	66
	53	100

Respondents who had attended maternal emergency training experience as many as 35 people (66%) and 18 (34%) never.

**Table 3. Frequency Distribution of Respondents Work Experience**

<b>Work Experience</b>	<b>Frequency</b>	<b>Percent</b>
< 10 years	11	20.8
≥ 10 years	42	79.2
	53	100

Respondents who have worked more than or equal to 10 years as many as 42 (79.2%), and less than 10 years as many as 11 respondents (20.8%).

**Table 4. Frequency Distribution Knowledge of Respondents**

<b>Knowledge</b>	<b>Frequency</b>	<b>Percent</b>
Less	2	3.8
Enough	9	17
Good	42	79.2
	53	100

Respondent who has good knowledge as 42 (79.2%), 9 (17%) are enough and 2 (3.8%) less knowledgeable.

**Table 5. Frequency Distribution Attitude of Respondents**

<b>Attitude</b>	<b>Frequency</b>	<b>Percent</b>
Negative	26	49.1
Positive	27	50.9
	53	100

Respondents with a negative attitude many as 26 (49.1%) and positive as many as 27 (50.9%).

**Table 6. Frequency Distribution Practice Early Detection of Preeclampsia**

<b>Practice</b>	<b>Frequency</b>	<b>Percent</b>
Negative	14	26.4
Positive	39	73.6
	53	100

Respondent with positive practice as many as 39 (73.6%) mean have done early detection of pre-eclampsia with a complete standard. Whereas 14 (26.4%) have not done a complete or negative practice.

**Table 7. Frequency Distribution Supervision by Midwife Coordinator**

<b>Supervision</b>	<b>Frequency</b>	<b>Percent</b>
Less	19	35.8
Good	34	64.2
	53	100

From the table it can be seen as many as 34 respondents (64.2%) stated that midwives' coordinator supervision is good and 19 (35.8%) was less supervision by midwife coordinator.

**Table 8. Correlation Age to Knowledge**

<b>Age</b>	<b>Knowledge</b>				<b>Spearman Correlation</b>
	Less	Enough	Good	Total	
21-35 years old	1	1	16	18	-0.18
36-56 years old	1	7	25	33	
> 56 years old	0	1	1	2	
	2	9	42	53	

As many as 18 people aged 21-35 years consisting of 16 respondents has good knowledgeable, and each one person less and enough knowledge. A total of 33 people aged 36-56 years made up of 25 respondents has good knowledgeable, 7 respondents enough and 1 less. And 2 respondents aged > 56 years have a good and enough knowledge. Spearman correlation coefficient -0.18, this means there is a negative correlation between age and the knowledge that there is a very weak relationship.

**Table 9. Correlation Age to Attitude**

Age	Attitude		Total	Spearman Correlation
	Negative	Positive		
21-35 years old	10	8	18	0.35
36-56 years old	14	19	33	
> 56 years old	2	0	2	
	26	27	53	

As many as 27 respondents who have a positive attitude consists of 8 respondents 21-35 years old, 19 respondents 36-56 years old. A total of 26 respondents have a negative attitude consists of 14 respondents 36-56 years old, 10 respondents 21-35 years old and 2 respondents > 56 years old. Spearman correlation coefficient 0.35, this means that there is a positive relationship between age and attitudes and relationships are strong enough.

**Table 10. Correlation Age to Practice Early Detection of Preeclampsia**

Age	Practice		Total	Spearman Correlation
	Negative	Positive		
21-35 years old	4	14	18	-0.148
36-56 years old	8	25	33	
> 56 years old	2	0	2	
	14	39	53	

As many as 39 respondents who carry out according to the standard (positive) consists of 14 respondents 21-35 years old, 25 respondents 36-56 years old. A total of 14 respondents had did not according to the standard (negative) consists of 8 respondents 36-56 years old, 4 respondents 21-35 years old and 2 > 56 years olds. Spearman correlation coefficient -0.148, this means there is a negative correlation between age and practice and there was very weak relationship.

**Table 11. Correlation Maternal Emergency Training to Knowledge**

Training	Knowledge			Total	Spearman Correlation
	Less	Enough	Good		
Never follow	0	3	15	18	0.830
Ever follow	2	6	27	35	
	2	9	42	53	

The table above show 18 respondents who never took part in the training consisted of three respondents have enough knowledgeable, 15 respondents have good knowledgeable. A total of 35 respondents who had attended the training consisted of two respondents have less knowledgeable, 6 and 27 respondents has enough and good knowledgeable. Spearman correlation coefficient 0.830, this means that there is a positive relationship between maternal emergency training and knowledge and there is a very strong relationship.

**Table 12. Correlation Maternal Emergency Training to Attitude**

Training	Attitude		Total	Spearman Correlation
	Negative	Positive		
Never follow	6	12	18	-0.226
Ever follow	20	15	35	
	26	27	53	

From the cross table maternal emergency training of obstetrics and attitude, as many as 18 people who never took part in the training consisted of six respondents being negative, 12 were positive. A total of 35 respondents who had attended the training consists of 6 respondents being negative, 12 being positive. Spearman correlation coefficient -0.226, this means there is a negative relationship between maternal emergency training and attitude and relationships that exist quite strong.

**Table 13. Correlation Maternal Emergency Training to Practice Early Detection of Preeclampsia**

Training	Practice		Total	Spearman Correlation
	Negative	Positive		
Never follow	4	14	18	0.608
Ever follow	10	25	35	
	14	39	53	

From the cross-table emergency training and attitude, as many as 18 respondents who never took part in the training consisted of 4 respondents being negative, 14 positive attitude. A total of 35 respondents who had attended the training consists of 10 respondents being negative, 25 being positive. Spearman Correlation coefficient 0.608, this means that there is a positive relationship between maternal emergency training and attitude and there are very strong relationships.

**Table 14 Correlation Work Experience to Knowledge**

Work Experience	Knowledge			Total	Spearman Correlation
	Less	Enough	Good		
< 10 years	1	1	9	1	0.207
≥ 10 years	1	8	33	42	
	2	9	42	53	

From cross table work experience and knowledge, as many as 11 respondents who experienced the working <10 years consists of each 1 respondent have less and enough knowledgeable, and 9 respondents have good knowledgeable. A total of 42 respondents who experienced the work more than or equal to 10 years each consisting of 1 respondent who is less knowledgeable and 8 respondents has enough knowledgeable, and 33 respondents have enough knowledgeable. Spearman Correlation coefficient 0.207, this means that there is a positive relationship between work experience and knowledge and existing relationships are strong enough.

**Table 15. Correlation Work Experience to Attitude**

Work Experience	Attitude		Total	Spearman Correlation
	Negative	Positive		
< 10 years	8	3	11	0.242
≥ 10 years	16	24	42	
	26	27	53	

From cross table work experience and attitude, as many as 11 respondents who experienced the working <10 years consists of each of 8 respondents who act negatively, 3 are positive. A total of 42 respondents who experienced the work more than or equal to 10 years each consisting of 18 respondents being negative and 24 positive. Spearman Correlation coefficient 0.242, this means that there is a positive relationship between work experience and attitude and there was very weak relationship.

**Table 16. Correlation Work Experience to Practice**

Work Experience	Practice		Total	Spearman Correlation
	Negative	Positive		
< 10 years	4	7	11	0.315
≥ 10 years	10	32	42	



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14	39	53
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From cross table work experience and practice early detection of pre-eclampsia, as many as 11 respondents who experienced the working <10 years consists of each of the 4 respondents who had negative practice and 7 respondents had positive practice early detection pre-eclampsia. A total of 42 respondents who experienced the work more than or equal to 10 years each consisting of 10 respondents had negative practice and 32 respondents had positive practice early detection pre-eclampsia. Spearman correlation coefficient 0.315, this means that there is a positive relationship between work experience and practice early detection of pre-eclampsia and existing relationships are strong enough.

**Table 17. Correlation Knowledge to Practice Early Detection of Preeclampsia**

Knowledge	Practice		Total	Spearman Correlation
	Negative	Positive		
Less	2	0	2	0.143
Enough	2	7	9	
Good	10	32	42	
	14	39	53	

In the cross-table knowledge and practice of early detection of pre-eclampsia, two knowledgeable respondents have less negative attitude. From 9 respondents who had enough knowledgeable, 2 respondents have negative attitudes and 7 respondents had positive attitude. 42 respondents who had good knowledge, 10 respondents had negative attitude and 32 respondents had positive attitude. Spearman correlation coefficient 0.143, this means there is a positive relationship between knowledge and practice early detection of pre-eclampsia and there was very weak relationship.

**Table 18. Correlation Attitude to Practice Early Detection of Pre-eclampsia**

Attitude	Practive		Total	Spearman Correlation
	Negative	Positive		
Negative	12	14	26	0.439
Positive	2	25	27	
	14	39	53	

In the cross-table attitude and practice of early detection of pre-eclampsia, 26 respondents who had a negative attitude, 12 people carry out early detection is not according to the standard (negative). 14 people carry out early detection according to the standard (positive). Spearman Correlation coefficient 0.439, this means that there is a positive relationship between knowledge and practice early detection of pre-eclampsia and existing relationships are strong enough.

## **Discussions**

### *KAP*

Midwives as health professionals have roles and responsibilities in maintaining maternal and child health. Habits undertaken in providing the service should be in accordance with operational standards. It is highly influenced by knowledge, attitude, behavior, experience and other demographic factors such as age and motivation. Midwives has an important role in the early detection of pre-eclampsia in each patient whether they are pregnant, childbirth or during the puerperium. Appropriate early detection has a significant impact on patients. Subsequent treatment of the patient depends heavily on the dexterity and early treatment performed by the midwife.

The univariate results of the study show that the majority of midwives have good knowledge, positive attitude and positive practice in early detection of pre-eclampsia. This high knowledge may be due to many factors including: education, sources of information, and the environment. This is confirmed by Notoatmodjo (2012), who states that knowledge is the result of knowing, after people do sensing of an object, and most of that knowledge is gained through eyes and ears. In addition, there are other factors that affect the knowledge someone who comes from education, experience, social relations and exposure mass media such as magazines, TV and books.

While bivariate analysis uses the Spearman correlation coefficient knowledge to practice is 0.143. This means that there is a positive relationship between knowledge and practice early detection of pre-eclampsia. Correlation coefficient attitude to practice is 0.439. Means that there is a positive relationship between knowledge and practice early detection of pre-eclampsia.

Knowledge is the result of out and do this after the sensing of the particular object. Sensing occurs through the five senses, the senses of sight, hearing, smell, and touch. A large part of human knowledge is obtained through the eyes and ears (Notoatmodjo 2012). Or cognitive domain knowledge is very important for the formation of a person's actions (Overt Behavior).

According to the constructivists approach, knowledge is not a fact of reality that is being studied, but as a person's cognitive construction of the object, experience, or environment. Knowledge is not something that is already there and available and while others stay to receive it. Knowledge is as a continuous formation by someone who underwent a reorganization at any time for their new insights. The better knowledge one has, the better it behavior. Knowledge of early detection of pre-eclampsia for midwives is necessary, because the midwife is a basic milestone in efforts to improve maternal health.

According to L. Green (1980) in (Notoatmodjo, 2012), in addition to being influenced by attitudes, practices as well is based on other predisposing factors of knowledge, belief, belief and value. Supporting factors that include facilities and health facilities and factors drivers that include attitudes

and behavior of health workers such as Public health Office. A person's attitude greatly influences the action to be performed.

Attitudes and behaviors are often said to be closely related, and the results also show a strong relationship between attitudes and behavior. Because attitude is a form of closed behavior. Therefore, to know how the actual attitude of an individual must be seen from his behavior.

### *Age*

In this study, 36-56 years old group have the most good knowledge that is as much as 25 respondents. The result of correlation age to knowledge using Spearman Correlation test is -0.18 its show negative and very weak relationship

Saparinah (1983) argues that at the age of 56 to 65 years age group who reach the stage of pre-retirement at this stage will experience a variety of decreased endurance / health and various psychological distress.

Age also affects the attitude and practice of a midwife in carrying out daily practices including attitudes about early detection of pre-eclampsia. Spearman Correlation coefficient age to attitude 0.35 it shows a positive and strong enough relationship and practice -0.148 show there is a negative and very weak relationship.

Age is an intrinsic factor that forms the emotional maturity of a person. The more emotionally mature one becomes, the easier it will be to accept and perform a positive habit. In the age 36-56 years old for midwives is the most productive age. At this age midwife has had enough experience and knowledge, and good physical condition.

In this age, an average midwife has reached a level of education that is sufficiently standardized that his knowledge increases. At this age the physical performance of a midwife is still good. Unlike if the midwife has been aged over 56 years, has entered the age of retirement. Then the productivity and physical ability of the midwife decreased.

In line with the case, a midwife in this age period has a motivation from within herself to do the best for herself, his career and her patients. Daily practice of midwifery included in early detection of pre-eclampsia will be carried out in earnest in accordance with applicable standards.

### *Maternal Emergency Training*

Another factor in this research is maternal emergency training factor which was followed by respondent. The results showed 35 respondents (66%) had attended training. The symmetric measure Spearman Correlation coefficient training experience to knowledge 0.830 its show positive and very strong relationship, to attitude -0.226 it shows a negative and very weak relationship. To practice 0.608 show there is a positive and strong relationship.

The training referred to in this research is the training of PPGDON (PertolonganPertamaKegawatdaruratanObstetri dan Neonatus / First Aid Emergency Obstetrics and Neonates). PPGDON Training is designed with the aim of understanding the principles of emergency management, obstetrics and neonates, able to recognize and conduct emergency life-threatening assessment of pregnant women, childbirth, childbirth and newborn, understanding the ethical and legal aspects of emergency in midwifery, able to handle and provide help quickly and accurately in order to save the soul of the patients (Life Saving).

Attending maternal emergency training is one effort to improve knowledge and skills of midwives including in early detection of pre-eclampsia. In the training, midwives will open their insights to practice properly. This is in line with the WHO (2015) statement that maternal emergency training is one of the efforts to reduce mortality and neonatal maternal complications especially in developing countries.

Midwives are at least encouraged to attend emergency maternal training at least once every 3 years. Because in 3 years there will be new theories that will be put forward. That way the midwife will always have the latest knowledge and skills according to the development of the health educational technology.

### *Length of Work*

Another factor which is also discussed in this research is the factor of length of work for midwife. The results showed the majority of respondents have worked for more than 10 years. The symmetric measure Spearman Correlation coefficient work experience to knowledge 0.207, to attitude 0.242. It shows there is a positive but very weak. Work experience to practice 0.315 show there is a positive relationship and the relationships that exist quite strong.

Work experience is the process of forming knowledge or skills about the method of a job because of the involvement of the employee in the execution of job duties. Work experience is a measure of the length of time or length of time a person has been able to understand the tasks of a job and has performed well. An experienced employee will have considerable confidence and can predict the difficulties and be ready to face it.

Based on WHO (1984) states that a person receives a particular object and obtained from the experience itself as well as the experience of others. Work experience also affects a person's level of knowledge and behavior. As long as someone works, the better the knowledge and experience he gets from working. The division of duration for the working period is: <10 years, and  $\geq 10$  years (Foster, 2008).

In categorizing the work experience, the basic as well as the assessment of performance, time frames vote length is 10 years of the first, second, third and so on, to get an award, therefore, working period midwife categorized tenure <10 years and  $\geq 10$  years. Because the working period is expressed as work experience, over 10 years of working period considered seniority.

In accordance with the WHO statement (1984), work experience influence knowledge attitudes and behavior of a midwife. The longer the work experience, the better the knowledge attitude and behavior. Work experience becomes the deciding factor because through one's experience learning something. Working as a midwife, if more than 10 years is considered to have good skills. Within 10 years, midwives have faced many patients with various physical and social conditions, especially in the case of pre-eclampsia.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

The conclusion that can be from this research are the majority of respondents aged between 36-56 years as many as 33 people (62.3%). The respondents trained in the maternity emergency training (PPGDON training) were 35 respondents (66%), had work experience of more than or equal to 10 years ie 42 respondents (79.2%), had good knowledge as many as 42 respondents (79.2 %). Have a

positive attitude that is 27 respondents (50.9%). Practice early detection of preeclampsia according to the standard of 39 respondents (73,6%). The respondents stated that the midwife coordinator had done a good supervision of 34 respondents (64.2%). Factors affecting early detection of pre-eclampsia are age, maternal emergency training, length of work, midwife knowledge and attitude.

#### Suggestions

To the private practice midwives to apply knowledge in the attitude and practice of early detection of preeclampsia every day.

To the association of midwives to conduct promotion and monitoring so that midwives consistently perform early detection of preeclampsia in each patient.

To the stakeholders such as the Samarinda City Health Office, in order to improve the role and function of midwives as front-line health personnel in the prevention of high-risk maternal cases such as preeclampsia.

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