The Overview of Pregnant Women Knowledge on Preeclampsia Disease in Midwifery Polyclinic Adam Malik Hospital 2016

by Johani Dewita Nasution

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Abstract

Pre - eclampsia is a disease that can arise during pregnancy. Lack of knowledge of the people, especially pregnant women about pre - eclampsia resulted in many pregnant women who do not know about the disease. There're many of pregnant women who have pre - eclampsia even some women died from it. This is a descriptive study with cross sectional design. The samples in this study were 36 people using accidental sampling technique that took respondents who happened to be there. From the research carried out, it showed that pregnant women with high school education had sufficient knowledge of as many as five people (27.8 %). By age, the majority of respondents aged 24-29 have solid knowledge or as many as 7 people (29.1 %). Based on information sources, the majority of respondents received sufficient knowledge from the printed media which is as many as one person (33.3 %). It is expected that health professionals and staffs in Adam Malik Hospital of Midwifery Polyclinic provide an explanation of pre - eclampsia to pregnant women in order to enrich their knowledge on that particular matter.

Key Words: Pre-eclampsia Disease; Knowledge.

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1. Introduction

The maternal mortality rate (MMR) and infant mortality rate (IMR) in Indonesia is the highest in Asia. In 2011, the maternal mortality rate (MMR) was about 307 per 100,000 birth which is 6, 5 higher than that of Singapore and 9.5 times higher than that of Malaysia. In fact, 2.5 times double of the Philippines index. Data were obtained from the Deputy of Social Sciences and Humanity Indonesia Institute of Science.

Maternal Mortality (AKM) and Prenatal Mortality Rate (AKP) can be used as a parameter of service. Yet, success in lowering Maternal Mortality in Developed countries has considered the Maternal Mortality as a better and more sensitive parameter to assess the quality of the health service. This is because the health and safety of the fetus in the womb is highly dependent on the state of the power system of the mother's body which have a function to regenerate the products of conception, in which one of the causes of prenatal death is pre – eclampsia.

Generally, people call it as poisoning pregnancy which is characterized by the appearance of high blood pressure, edema or swelling in the legs, and visible urine protein when examined in a laboratory. The cause itself is actually still a debate. Some say that it is due to the lack of arachidonic acid which originally resulted from nuts. Some also suspect that it is due to stress of the mother and other emotional factors. Stress during pregnancy may indirectly or directly lead to increased complications of pregnancy [1].

During the postpartum period on days 1 through 28, the mother must be alert to symptoms of pre - eclampsia. If the situation gets worse, eclampsia could possibly happen. It is signed by the loss of consciousness and high blood pressure. As a result, the brain's blood vessels can rupture and edema of the lungs will trigger coughing up blood. All this can lead to death.

Pre- eclampsia is an increase in blood pressure ≥ 140 / 100 mmHg emerging after 20 weeks of pregnancy, accompanied by weight gain due to rapidly swollen body of the mother's and the laboratory tests found proteinuria in the urine. Hypertension in pregnancy should be defined as a diastolic BP of 90 mmHg [2]. Pre-eclampsia is clinically defined by hypertension and proteinuria, with or without pathological oedema that occurs after 20 weeks' gestation, but can also present up to 4-6 weeks post-partum or the fetus weighs 500 grams), which is characterized by hypertension, proteinuria and edema [3]. Evidence suggests that PE can be subdivided into early onset PE, requiring delivery before 34 weeks' gestation and late onset PE, with delivery at or after 34 weeks, because the former is associated with a higher incidence of adverse outcome [4]. Pre - eclampsia is a special condition in pregnancy, characterized by increased blood pressure (BP) and proteinuria. It may be associated with seizures (eclampsia) and multiple organ failure of the mother, while the fetal complications include growth restriction and placental abruption.

Pre- eclampsia is a disease with signs of hypertension, edema and proteinuria arising during preganancy. Pre - eclampsia is common in risky pregnancies for fetal death and mother as well. Risk factors for preeclampsia include nulliparity, multifetal gestations, previous history of preeclampsia, obesity, diabetes mellitus, vascular and connective tissue disorders like systemic lupus erythematosus and antiphospholipid antibodies [5]. Early

detection for hypertension in pregnant women is needed in order to prevent serious disorder and disrupt life as well as the health of the fetus in the womb.

Preeclampsia is a multisystem, highly variable disorder unique to pregnancy and a leading cause of maternal and fetal/neonatal morbidity and mortality [6]. In Indonesia, pre - eclampsia is still a major cause of maternal mortality and causes of prenatal death, after bleeding and infection. It is estimated that pre - eclampsia occur 5 % of pregnancies, more often found in first pregnancy. It is also found in pregnancy of women who previously suffered from high blood pressure or suffered from vascular disease.

Pre- eclampsia is a unitary disease caused by pregnancy. The causes of the disease is yet unknown. Among bleeding and infection, pre - eclampsia is the leading cause of maternal deaths and prenatal. Therefore, early diagnosis is very important, in order to recognize and treat light pre - eclampsia so as not to continue to be eclamsia. This can be known if pregnant women check themselves during pregnancy. So it is clear that regular antenatal examination is very important in the prevention of pre – eclampsia [7]. In pre – eclampsia, it is also found the risk in preterm pregnancy, artificial birth, and a higher propensity to have a baby with low birth weight (LBW). When hypertensive disorders complicate a pregnancy before full term, the risks of preterm delivery must be considered in addition to the risks to the mother [8]. One of the effort in reducing maternal mortality as a result of pre - eclampsia is by minimizing the incidence of pre-eclampsia.

One of the most common, yet treatable causes of maternal death world-wide is pre-eclampsia and eclampsia [9]. In developed countries, the disease is a major cause of maternal death. In the UK, most of these deaths are associated with sub- optimal care, especially by intrapartum care provider. Causes of maternal deaths are mostly caused by bleeding of 40 % - 60 %, toxemia gravidarium of 30 % -40 % and the infection of 20 % -30 %. These deaths can generally be prevented if the pregnancy complications and other high risk can be detected early, then get proper and adequate treatment at the most critical moment during the time around of childbirth. So, in this case, toxemia gravidarum (pre-eclampsia) ranks second cause of maternal deaths.

Pre- eclampsia is associated with abnormal implantation of the placenta and the shallow invasion thromboplastic resulting in reduced perfusion of plasenta. Arteria maternal spiral fail to experience normal physiological vasodilatation; Blood flow then suffers from aterotic changes that cause obstruction in the blood vessels. A similar picture of the inadequate invasion thromboplastic can also be looked at pregnancies complicated by fetal growth restriction in the mother without pre - eclampsia. Therefore, maternal pre - eclampsia syndrome must relate to additional factors. Factors that influence the occurrence of pre - eclampsia are the number of primigravidae, especially young primigravidae, distension of the excessive uterus, as hidramnion, double pregnant, hydatidiform mole, a disease that accompanies pregnancy, such as diabetes mellitus (DM), obesity, the number of maternal age above 35 years old [10].

Reported incidence rates as much as 6 % of all pregnancies and 12 % of pregnancies in primigravidae. According to some other authors, other frequencies are reported of about 3-10 %. It is more common found in primigravidae than multigravida, especially young primigravidae. Predisposing factors for the occurrence of pre - eclampsia is molar pregnancy, diabetes mellitus, multiple pregnancy, fetal hydrops, obesity, and pregnancy at

the age over 35 years [7].

Increased blood pressure in the latter half of pregnancy characterized by edema (excessive fluid retention and swelling) of the hands, feet, face, as well as the presence of protein in the urine which is called pre - eclampsia. It was called tocsemia. Recently, it is called pre - eclampsia which is considered as a group of symptoms that are now included in the diagnosis of pregnancy-induced hypertension (PIH).

One of the causes of the death of mother and fetus is pre - eclampsia (PE), which according to WHO incidence rates ranging from 0.51% -38.4 %. In developed countries, the incidence of pre - eclampsia is around 13 % of pregnancies. In Indonesia, the incidence of pre - eclampsia syndrome is 3.5 % -8.7 % of all pregnancies. Meanwhile, the maternal mortality rate (MMR) caused by pre - eclampsia in developing countries is still high.

According to data from the Medical Record in H.Adam Malik Hospital Medan in 2012, it is obtained that the number of pregnant women with pre - eclampsia have been 27 people out of 750 who checked during their pregnancy and in 2013. From the months of January-February, there are as many as 8 people with pre-eclampsia from 240 pregnant women who did checkups to RSUP.H.Adam Malik Midwifery Polyclinic.

The high maternal mortality due to pre - eclampsia can be caused by the lack of knowledge and awareness of the mother to perform routine antenatal care.

In fact, any disease can already be handled quickly with early detection which is done regularly so as to reduce the risk of mortality. The research conducted by Dewi Barus discovered that mother's knowledge was sufficient.

From interviews conducted at several pregnant women who did checkups (5 patients) at the Midwifery Polyclinic H.Adam Malik Hospital is known that many pregnant women haven't known clearly about pre – eclampsia during pregnancy.

Two mothers said that they do not know about pre – eclampsia with certainty while two pregnant women said they had heard of pre – eclampsia from a doctor during the examination of pregnancy but still do not know about the meaning of pre – eclampsia. Another mother said that the mother was not aware of pre – eclampsia in pregnancy.

Based on the results of a preliminary survey conducted by researchers above, the authors are interested to know more about Knowledge Overview of Pregnant Women on Pre – Eclampsia Disease in Midwifery Policlinic of Adam Malik Hospital.

1.1. Problems of research

From the description above, the authors formulated the issues to be: How is an overview of pregnant women knowledge about the pre – eclampsia disease when viewed from: education, parity, and the information resources that can be acquired in a Midwifery Polyclinic of H.Adam Malik Hospital?

1.2. The objective of reasearch

To find an overview of pregnant women knowledge about the preeclampsia disease at Midwifery Polyclinic of H.Adam Malik Hospital.

1.2.1.   To determine the level of knowledge of pregnant women about the preeclampsia disease based on education.

1.2.2.   To determine the level of knowledge of pregnant women about the pre – eclampsia disease by age.

1.2.3.   To determine the level of knowledge of pregnant women about the pre – eclampsia disease based on information resources.

1.3. Significance of the Study

1.3.1.   For the researchers

To increase knowledge, insight as well as a requirement in completing the final study of nursing program and its current curriculum.

1.3.2.   For Pregnant Women

To increase knowledge about the pre – eclampsia disease so that mothers can do checkups on a regular basis to determine the early symptoms of the pre – eclampsia disease.

1.3.3.   For Educational Institutions Department of Nursing

The results of this research benefit the institutions in order to create students that possess the ability and knowledge.

1.3.4.   For Health Services

It is useful for improving the quality of health services, especially for pregnant women in antenatal care in order to be detected early of having pre – eclampsia for pregnant women.
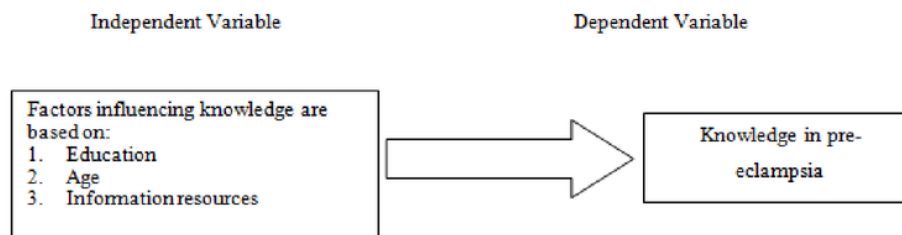
2. Conceptual Framework

Independent Variable   Dependent Variable

Factors influencing knowledge are based on:
1. Education
2. Age
3. Information resources

Knowledge in pre-eclampsia

Figure 1

Table1: Operational Definition

No	Variable	Operational Definition	Instrument	Output		Scale
	Independent					
1	Education	Learning process based on the last national educational system	Questionnaire	a. b. c. d.	SD SMP SMA Higher Education	Ordinal
2.	Age	Respondent life span at the time of the research	Questionnaire	a. b. c.	18-23 y. o 24-29 y. o 30-35 y. o	Interval
3.	Information Resources	The source of pre-eclampsia information obtained by the respondents	Questionnaire	a. b. c.	Printed Media (magazine, newspaper, book) Electronic Media (radio, TV, internet) Health Professionals (nurse, midwife, doctor)	Ordinal
	Dependent		Questionnaire			
1.	Knowledge	Any information known by respondents on pre-eklmapsia		a. b. c.	Good Knowledge (76%-100%) Sufficient Knowledge (56%-75%) Poor Knowledge (<55 %)	Ordinal

3. Research Method

This is a descriptive study in which the main goal is to obtain an overview of a situation objectively. In this case, it is to determine the factors influencing knowledge of pregnant women about the pre - eclampsia disease in Midwifery Polyclinic of H.Adam Malik Hospital in 2013. The research design used is cross sectional study design with measurement or observation at the same time (one time). Research will be conducted at the Midwifery Polyclinic of H.Adam Malik Hospital in Jl. Bunga Lau Malik 17 Medan and was planned in April-June, 2013. The populations in this study were all pregnant women in the antenatal check Midwifery Polyclinic of H.Adam Malik Hospital from January to March 2013 amounted to 240 people. Samples from this study are part of the population using accidental sampling method that is all respondents who happened to be outpatient of Polyclinic RSUP.H.Adam Malik from April to June, 2013. According to Arikunto [11] that if the subject of research of more than 100, then sampling can be 10-15 % and 20-25 % of the total population. The population was 240 people who did checkups in Midwifery Polyclinic H.Adam Malik Hospital Medan. The samples were taken by 15 % of the total population.

Thus, the amount of sample is:

15 x 240 = 36

100

The type of data acquired includes primary data and secondary data, namely:

1. Primary data

The data collected in this study are primary data from interviews with questionnaires distributed to respondents. The process of collecting data used are researchers introduced themselves, explained the purpose of research, provided a letter of approval to respondent.

2. Secondary Data

Secondary data is data obtained from other parties, bodies / institutions that routinely collect data. It is obtained from data collection at the Obstetric Clinic Medical Record of H.Adam Malik Hospital includes: pregnant women during their pregnancy.

3.1. Data processing

1. Editing

The questionnaire results obtained or collected through questionnaires need to be edited in advance. If there are mistakes and shortcomings in data collection, it will be improved by rechecking and recalculate the data collection.

2. Coding

Granting code or mark on any data that has been collected to make it easier to enter into the master table.

3. Data entry

Data that has been edited will be entered into the computer to be processed with SPSS.

4. Tabulation

To facilitate data analysis, data processing and data deduction thus it is put into a frequency distribution table.

3.2. Data analysis

This analysis was conducted to determine descriptive overview of each variable. The collected data were analyzed descriptively and produced the proportion of each of the measured and presented variables in tabular form of frequency. Variable distributions used by researchers are education, parity and information resources. To know the mother's knowledge about the pre - eclampsia disease then they will be given the question. There are 15 questions on particular knowledge in which each correct answer is worth one value. The score will be zero if it is not answered. The wrong answer will be also valued zero.

Knowledge is divided into four categories, namely:

1. Knowledge is good if the respondent can answer correctly 76 % -100 % of the whole question.

2. Knowledge is sufficient if the respondent can answer correctly 56 % -75 % of the whole question.

3. Knowledge is not good if the respondent can answer correctly < 55 % of the whole question [11].

Data analysis will be obtained descriptively by looking at frequency tables, then made a conclusion using the following formula,

Formula:

$$\overline{x} = \frac{\sum x}{n} \times 100\%$$

Information:

$\overline{x}$: The average value sought

Σx : Number of respondents value

n : Number of samples of respondents [11]

4. Research Result

In this chapter, the results of research will be presented and also discussion regarding the knowledge of pregnant women about the pre - eclampsia disease in Midwifery Polyclinic of H. Adam Malik Hospital. The process of data collection was conducted in July 2013 among 36 respondents in H.Adam Malik Hospital. Presentation of research data is through the overview of the distribution of pregnant women that include education, age, and information resources. Pregnant women who act as respondents filled out the questionnaire in this study in the form of independent variables and the dependent variable, the obtained data is as follows:

Table 2: Knowledge Frequency Distribution of Pregnant Women on Pre-eklampsia Disease in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Knowledge	Numbers	Percentage (%)
1.	Good	16	44,5
2.	Sufficient	8	22,2
3.	Poor	12	33,3
	Total	36	100

From the table above it can be seen that the respondents who have a good knowledge were as many as 16 people (44.5 %), while having a poor knowledge were as many as 12 people (33.3) and having a fairly good knowledge were as many as eight people (22.2 %).

Table 3: Frequency Distribution of Pregnant Women Education-Based in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Education Level	Numbers	Percentage (%)
1.	Primary School	-	-
2.	Junior High School	5	13,9
3.	Senior High School	18	50
4.	Higher Education	13	36,1
Total		**36**	**100**

From the above table it can be seen that the majority of respondents with high school education level were as many as 18 people (50 %), the level of college education were 13 (36.1 %), whereas at the level of secondary education were five people (13.9 %).

Table 4: Knowledge Frequency Distribution of Pregnant Women Based on Education on Pre-eclampsia Disease in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Education Level	Knowledge						Total	
		Good		Sufficient		Poor			
		N	%	N	%	N	%	N	%
1.	Primary School	-	-	-	-	-	-	-	-
2.	Junior High School	1	20	1	20	3	60	5	13,9
3.	Senior High School	7	38,9	4	22,2	7	38,9	18	50
4.	Higher Edu.	8	61,5	3	37,5	2	15,4	13	36,1
	Total	16	44,5	8	22,2	12	33,3	36	100

From the table above it can be seen that the majority of college -educated respondents with good knowledge were as many as eight people (61.5 %), and the majority of respondents who had high school with a good knowledge were 7 people (38.9 %), while the majority of respondents of junior high school with less knowledge were as many as 3 people (60 %).

From the table above it can be seen that the majority of respondents aged 24-29 years were as many as 24 people (66.6 %) while those aged 30-35 years were as many as 10 people (27.7 %) and as many as 2 (5,5 %) of respondents were aged 18-23 years old.

Table 5: Frequency Distribution of Pregnant Women Based on Age in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Age	Numbers	Percentage (%)
1.	18-23 y. o	2	5,5
2.	24-29 y. o	24	66,6
3.	30-35 y. o	10	27,7
	Total	**36**	**100**

Table 6: Knowledge Frequency Distribution of Preganant Women Based on Age on Pre-Eclampsia Disease Age in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Age	Knowledge						Total	
		Good		Sufficient		Poor			
		N	%	N	%	N	%	N	%
1.	18-23 y.o	1	50	-	-	1	50	2	5,5
2.	24-29 y.o	11	45,9	7	29,1	6	25	24	66,6
3.	30-35 y.o	4	40	1	10	5	50	10	27,7
Total		16	44,5	8	22,2	12	33,3	36	100

From the table above it can be seen that the majority of respondents aged 24-29 years with a good knowledge were as many as 11 people (45.9 %). The majority of respondents aged 30-35 years with poor knowledge were as many as five people (50 %) and there was 1 person (50 %) from the majority of respondents aged 18-23 years old with poor knowledge.

Table 7: Frequency Distribution of Pregnant Women Based on Information Resources in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Information Resources	Numbers	Percentage (%)
1.	Printed Media	3	8,3
2.	Electronic Media	15	41,7
3.	Health Professionals	18	50
4.	Family	-	-
	Total	**36**	**100**

From the table above it can be seen that the majority of respondents who obtained information from health officials were as many as 18 people (50 %), while the electronic media were as many as 15 people (41.7 %) and there were 3 people (8.3 %) who obtained information from the printed media. From the table above it can be seen that the majority of respondents who obtained the information from the electronic media with a good knowledge were 7 people (46.6 %), while obtaining information through health officials with a good knowledge

were 8 people (44.5 %) and those obtained information through the printed media with fairly good or less was only one person (33.3%).

Table 8: Knowledge Frequency Distribution of Pregnant Women Based on Information Resources on Pre-Eclampsia Disease in Midwifery Polyclinic of H.Adam Malik Hospital Medan 2013.

No.	Information Resources	Knowledge						Total	
		Good		Sufficient		Poor			
		N	%	N	%	N	%	N	%
1.	Printed Media	1	33,3	1	33,3	1	33,3	3	8,3
2.	Electronic	7	46,6	4	26,7	4	26,7	15	41,7
3.	Health Pro.	8	44,5	3	16,7	7	38,8	18	50
4	Family	-	-	-	-	-	-	-	-
	Total	16	44,4	8	22,3	12	33.3	36	100

5. Discussion

5.1. Factors affecting pregnant women knowledge about the pre - eclampsia disease are as follows

a. Education

One's education aims to establish and improve human abilities. Education is a process of meaningful learning in education and deemed as a process of growth, development, or a change to a more mature and better individual, group or community [12]. The results are consistent with the theory that the higher the level of one's education, the better the level of knowledge. It is proved from the research results that respondents who graduated from junior high are majority having less knowledge as many as 3 people (60 %); the authors argue that this is due to the age of respondents who are categorized as old. So, the ability to obtain better information is getting declined and the information received by the respondent was not optimal and often it is affected by the relatively low education of respondents. While the 7 people of respondents who were high school graduates considered to have good knowledge (38.9 %). This is because that the respondents have a sufficient level of education and also affected by the age of the respondents who were relatively young, so they can receive the information well and clear. Respondents who graduated from college are considered knowledgeable with as many as 8 people (61.5 %). This is caused by the age of majority respondents who were younger and had a good education. They often receive information from various media and health related workers. Thus, a person's education level affects the level of knowledge she possesses.

b. Age

Age is a variable that is always observed in the epidemiological investigation. The figures of morbidity or mortality of almost all circumstances show the relationship with age. When it is connected with knowledge, age is a variable that is always noticeable. According to Notoadmodjo [12], age is one that affects the knowledge in one's thinking process. The older the person is, and then a lot of knowledge gained. Based on the results of

research, there's a gap between theories with the result. The respondent's age has a tendency to be reversed with the respondents' knowledge. This study obtained that a young aged- individual has a better knowledge than old aged-people. It is proven from the results obtained that the respondents who were aged 18-23 years with less knowledgeable are as many as 2 people (100 %), respondents aged 24-29 years with good knowledge are of 11 people (45.9 %), while respondents aged 30-35 years with less knowledgeable are 5 people (50 %). Thus, a person's age did not affect the level of knowledge.

c. Resources

Sources of information are data that has been processed into a form that has real value for future decisions. Information is illumination, description, notice of news or stories about something (Dictionary of Indonesia). The definition of communication information is information aimed at audiences outside the organization, a particular group in society. According to the research, there is no gap between the theory and the results. It is evident from the findings that the majority of respondents who received information from the printed media with less good knowledge is as many as one person (33.3%), while the majority of respondents who received information from the electronic media with a good knowledge are of 7 people (46.6%) and the majority of respondents who received information from health professionals with good knowledge are as many as 8 people (41.2%). Thus, the source of information which is seen and heard by respondents has an influence on the level of knowledge and research results are consistent with the theory.

5.2. Knowledge of Pregnant Women

Knowledge is the result of one characteristic in human beings who are always curious and never stop wondering. Knowledge is the result of knowing and this occurred after people perform sensing against a specific object [12]. In this case, the knowledge of pregnant women about the pre - eclampsia disease. The result of 36 respondents concluded that the majority of pregnant women who have good knowledge are as many as 16 people (44.5 %). This is supported by respondents with young age, highly educated, and often obtain information from health care providers and electronic media, while the majority of the less knowledge are as many as 12 people (33.3 %), and the majority of sufficient knowledge are as many as 8 people (22 , 2 %). This is due to the respondents who are older, relatively with low education and lack of information.

6. Conclusion

6.2. Education has an important role in determining the quality of a person and his knowledge. Respondents with better education will be more attentive to the conditions and have the will to seek knowledge. Thus, the level of education affect a person's knowledge, the higher the level of education, the better level of knowledge.

6.3. Respondents who have a long lifespan or aged older does not always have a good knowledge about the pre - eclampsia disease. This is because those with young ages might have high motivation to seek knowledge by reading or listening information and have a better memory than the older ones.

6.4. The more information that is received by the respondent either through health care workers and electronic media, the better the level of knowledge of pregnant women about the pre - eclampsia

disease.

7. Suggestion

7.2. To the medical officer of health personnel especially in Midwifery Polyclinic of H.Adam Malik Hospital, it s suggested to provide more counseling and health education about pregnancy, especially illnesses that can arise during pregnancy such as pre - eclampsia.

7.3. It is advised to the pregnant women to be more active to enrich their knowledge by a lot of reading or listening to either printed and electronic media about things associated with pre - eclampsia.

7.4. To the editors of printed and electronic media, it is recommended to reproduce more articles on health with attractive and easy to understand explanation in order to add to the reader's interest.

7.5. To the other researchers, it is expected to continue this research in order to obtain maximum results.

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