

## **Early Detection of Pregnancy Complications in Siabu Health Center, Mandailing Natal Regency**

**Ayu Ulfah Nur Lubis<sup>1</sup>, Sri Rezeki<sup>2</sup>, Seri Wahyuni Harahap<sup>3</sup>,**

<sup>1</sup> Sekolah Tinggi Ilmu kesehatan Namira Madina, Indonesia

<sup>2</sup> Sekolah Tinggi Ilmu kesehatan Mitra Husada Medan, Indonesia

<sup>3</sup> Akademi Kebidanan Kholisatur Rahmi Binjai, Indonesia

---

### **Article Info**

#### **Article history:**

Received May 26, 2023

Revised June 10, 2023

Accepted June 13, 2023

---

#### **Corresponding Author:**

Ayu Ulfah Nur Lubis

Sekolah Tinggi Ilmu kesehatan  
Namira Madina, Indonesia

Email:

[ayuulfahnurlubis@yahoo.com](mailto:ayuulfahnurlubis@yahoo.com)

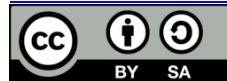
---

### **ABSTRACT**

The world health agency or WHO issued a statement that the deaths that occur in mothers in the world are on average due to complications during pregnancy and also the delivery process. And in 2017 alone there were around 810 cases. Even though from the beginning of 2000 until now there has been a decrease in cases of up to around 38%, the mortality rate of pregnant women continues to be a concern of the World Health Organization. The statement also stated that the deaths received by these pregnant women globally occur in countries that have low GDP and middle income. Indonesia is one of the countries with a high rate of maternal mortality due to complications of pregnancy and childbirth. Assistance during labor and also during pregnancy must be a concern for medical personnel and also health workers. It is hoped that these medical personnel can provide skills and are also trained in treating pregnant women. Complete health facilities can be one way to reduce maternal and child mortality. Pregnant women must also have education, awareness and information about the importance of prenatal checks for medical personnel. Service on the community side of course has the aim of increasing the knowledge of pregnant women about anemia and early detection of complications in pregnancy. Education and information regarding early detection of pregnancy complications is the main concern of the Siabu Health Center, Mandailing Natal Regency.

**Keywords:** *Pregnancy, Detection, Complications*

This article is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).



---

## **1. INTRODUCTION**

Family is one of the determinants of the quality of life of individuals and society. Families that are prosperous and healthy and have a good quality of life can be seen from the mother's health perspective. This is because in the life cycle every woman always goes through a process, namely pregnancy, birth or delivery, childbirth and also having a baby. This is one of the main milestones in a healthy and prosperous family. On average, around 160 million women in Indonesia experience pregnancy every year. And every woman who has healthy reproductive organs and also has menstruation and has sexual intercourse with a halal partner, has a high probability of experiencing pregnancy.

Pregnancy itself is a process of fertilizing mature eggs from sperm that enter the reproductive organs. And these two will unite and form cells that grow into fetuses and eventually develop into babies who are ready to be born into the world. However, it is not realized that in this process there is a possibility that complications will occur which can pose a threat to the life and soul of pregnant women. Not only that, the fetus also has the possibility of experiencing complications and also life being threatened due to these complications.

A normal pregnancy is not impossible, there will be developments that make the pregnancy process quite difficult and can also harm the fetus and pregnant women. Normal pregnancies still have the possibility of pathological pregnancies which can have a pretty bad impact during the delivery process and also during the puerperium. Such pathological pregnancies do not occur by chance and suddenly. Usually the effects of this pregnancy on the organs of the body will take place gradually. It's the same when there is pain located in the epigastric area which is characterized by quite severe dizziness. In addition, the fetus is no longer moving and felt. Bleeding during pregnancy and high blood pressure during pregnancy is a sign. Not to mention preeclampsia and also severe pain in the abdominal area. Other symptoms are placenta previa and placental abruption. And it turns out that these complications don't just stop during pregnancy. These complications can have a high risk impact during labor, childbirth and also the baby being born. Besides that, it can have a considerable influence when you want to use the contraceptive you want to use.

Husband and wife should do planning regarding the number of children they want to be born or want. This certainly can provide an opportunity for a mother to recover after giving birth. Especially after giving birth, a mother must breastfeed and also take care of the baby. Regulating the spacing of pregnancies can be one of the efforts and efforts to reduce mortality and morbidity for mothers and babies. Determining the number of children and adjusting the spacing of pregnancies yourself can be done by using the right contraception.

Methods and efforts to reduce maternal and child mortality, of course, must focus on the causes of maternal death which usually occur during childbirth and after delivery. It is noted that obstetric complications are very often unpredictable or predictable during pregnancy in the mother. These complications will only appear and occur when labor arrives.

Minimal information and also the factor of not knowing that pregnant women will be at risk during pregnancy are indeed the main factors. Not to mention the lack of early detection which can have an impact on further processes that can cause complications. This provides factors and influences regarding the high maternal and infant mortality rates even though according to data that the maternal and infant mortality rates have decreased cumulatively every year. Complications that occur during pregnancy and childbirth have a huge impact when entering the puerperium.

Efforts and ways to reduce maternal and infant mortality have been proclaimed by the United Nations General Assembly called the Sustainable Development Goals or SDG's 2030 where health services must be able to provide quality and sustainable services. This is done from the period of pregnancy, childbirth, postpartum to neonates and also the selection and use of contraceptives. The government itself has programs that are aligned and synergized to overcome these problems so that maternal and infant mortality rates can be reduced every year.

The program from the government is the Birth Planning and Complication Prevention Program or P4K and integrated pregnancy visits which are conducted at least 4 times in order to self-detect any complications that could occur to the mother and child. In addition, this program can provide treatment for complications that can be used as preparation and planning for childbirth so that it runs smoothly and prevents pregnant women from pain and death.

In the process of monitoring delivery using the Pathograph system from WHO. Meanwhile, in order to assist the delivery process, it is carried out with 60 APN steps and is equipped and supported by tested, skilled and trained health workers. In order to provide assistance to postpartum mothers, it can be given at least 3 times according to the schedule, which is 6 hours to 3 days after delivery. As for the 4th to 28th day and 29th to 42nd day of the delivery process which includes maternal health and also postpartum to the use of contraceptives if you want to use them immediately.

In this study, we will discuss early detection of complications in pregnant women at the Siabu Health Center, Mandailing Natal Regency. From this background, the formulation of this problem is used to see how the early detection process at the Siabu Health Center in Mandailing Natal Regency is running well and optimally. The purpose of this research is to provide information and knowledge for students who are just learning and to be an opportunity in the process of applying theory to experience in the field. Especially in terms of providing information and education to pregnant women.

Pregnancy is a natural process for humans to maintain the continuity of human civilization and human development. Pregnancy itself can occur if a woman enters puberty which has signs of menstruation. Meanwhile, based on the International Federation of Obstetrics and Gynecology, pregnancy has the definition of fertilization from a sperm cell to an egg or ovum which continues to implantation and nidation.

There are signs and symptoms of pregnancy which are divided into 3 signs consisting of:

1. Definitely a sign of being pregnant

Certain signs of pregnancy have several signs, namely:

- a. There is a heartbeat of the fetus  
The certainty that a woman is experiencing pregnancy is the sound of the heartbeat or heartbeat of the fetus. And this can be felt by touching or using tools such as ultrasound and other tools. The intensity of the fetal and mother's heartbeats is very different, so you can feel it by touching it.
  - b. Felt fetal movement  
Apart from the heart rate, there are fetal movements that are felt when touched. This fetal movement is one of the sure signs of pregnancy
  - c. Embryo overview  
When using an ultrasound examination, besides being able to find out the heartbeat, you can also see the presence of a gestational sac and also an image of the embryo. This is one of the signs of pregnancy that must have happened.
2. Not pregnant sign  
There are several signs of not being pregnant which consist of:
- a. Enlarged uterus  
A sign that a woman is not pregnant is an enlarged uterus
  - b. Hegar sign
  - c. Chadwick's sign
  - d. Braxton Hicks
  - e. Piskacek's sign
  - f. BMR has increased
  - g. Ballotment has a positive value
  - h. Positive HCG or pregnancy urine test
3. Suspicion of pregnancy  
While the third sign is a sign of suspected pregnancy which consists of:
- a. Amenorrhea or not having menstrual cycles that match
  - b. Anorexia, nausea, hypersalivation and also emesis
  - c. Dizzy
  - d. Opstipation
  - e. Frequent urination
  - f. Varicose veins
  - g. Enlargement and tightening of the breasts
  - h. hyperpigmentation
  - i. Changed moods
  - j. Weight gain

Early detection of pregnancy is an aspect that must be understood by health workers and also pregnant women. Early detection is an activity that aims to find out whether pregnant women are at high risk of experiencing complications during that pregnancy. Risk factors themselves are conditions and also certain characteristics and conditions suffered by pregnant women and also groups that have a high level of risk and danger of getting labor complications.

**Table 1.** Risk Factor

	<b>Risk factor</b>	<b>Score</b>
<b>Risk Factor I - APGO</b>	Young Primi	4
	Old Primi	4
	Secondary Old Primi	4
	The youngest child is less than 2 years old	4
	Grande Multi	4
	Mother's age is more than 35 years	4
	Height less than 145 cm	4
	Have had a miscarriage or failed to get pregnant	4
	Labor with action	4
	Former cesarean section	8

<b>Risk Factor II - AGO</b>	Mother's disease	4
	Mild preeclampsia	4
	gemeli	4
	Hydramnios	4
	IUFD	4
	Serotonin's Pregnancy	4
	Breech location	4
	Latitute	4
<b>Risk Factor III - AGDO</b>	Antepartum Bleeding	8
	Severe preeclampsia	8

According to Poedji Rochjati's score, there are risks that are classified into 3 categories. Namely FR categories I, II and also III which consist of:

1. FR I or Risk Factor I

In this risk factor there is a potential obstetric emergency or APGO with format 7 too and 3 ever. The seven too are young primi and old primi, secondary old primi, over 35 years of age and also grande multi. Then there is the youngest child, less than 2 years old, less than 145 cm tall. While for 3, there was a lack of obstetric history, childbirth experienced a bleeding process, vaginal procedures during labor and scars from cesarean section.

2. FR II or Risk Factor II

In the Risk Factor II group or category there is Obstetric Emergency or AGO. Usually these factors consist of congenital diseases from pregnant women, mild preeclampsia due to twin pregnancies, serotin pregnancy, hydammion and also breech location and latitude.

3. FR III or Risk Factor III

In this category there is an Obstetric Emergency or ADGO. These factors usually include antepartum bleeding as well as severe preeclampsia or eclampsia.

The risk groups based on the total score in each group are 3 risk groups consisting of:

1. Low Risk Pregnancy

The Poedji Rochjati score has a score of 2 with green as the code. And this is a low-risk pregnancy process and also without any FR or risk factors in it.

2. High Risk Pregnancy

Pregnancy with a Poedji Rochjati score of 6 to 10 with yellow as the code, it can be ascertained that Single Risk Factors from FR I to III and Double FR groups in FR I and II categories

3. Very High Risk Pregnancy

Mothers who get a value of more than 12 and red in the code, then this pregnant woman has a double FR of 2 or more.

Early pregnancy often occurs in women. And usually, in general, women will be ready to get pregnant physically if they have completed the growth and development of the body around the age of 20. It is associated with a body that stops growing. And at the age of 20, it is indeed a benchmark or reference for checking physical readiness for pregnancy. Meanwhile, based on the BKKBN (2011) it is stated that the ideal age for pregnancy is between the ages of 20 and 35 years.

Young primi or early pregnancy is a risk factor group I which has a score of 4 according to Poedji Rochjati's score calculation. This condition is of course very dangerous for pregnant women and also the fetus. The reason is that at that age the mother is not fully mature both physically, psychosocially and also cognitively. Of course the mother's condition before entering pregnancy can have an influence on the pregnancy. And one of the indirect effects of maternal death is anemia. Chronic energy deficiency or CED as well as being too young to get pregnant.

Early pregnancy has its own impact on women. This is shown if women who are less than 19 years old during their first pregnancy, have a very high risk of around 80% to perform a cesarean section for their first birth. And this will have an effect on the next pregnancy which will also use a cesarean section. Young mothers who are pregnant have a high risk level in terms of mortality, which is about 45% higher. And about 30% have a high risk of losing the baby in the first 6 weeks after birth.

It was also stated that mothers who are pregnant young and aged less than 20 years have a very high chance of getting eclampsia and anemia. Not to mention the chances of experiencing bleeding during labor, cephalopelvic disproportion and also prolonged labor and cesarean section. Children born to mothers aged

less than 20 years will have a much higher risk level in terms of low birth weight and premature. In addition, the risk of infant mortality is quite large with the increased risk of asphyxia.

Pregnancy in adolescence is closely related to the risk of PIH or pregnancy induced hypertension and also preclamptic toxemia or PET. Then there is also the opportunity to experience the risk of eclampsia, the onset of labor with a high rate of premature birth. Not to mention fetal death, higher premature births. Meanwhile, neonatal morbidity and mortality in infants has increased. Especially if teenagers aged 17 years who are very vulnerable to this risk.

There are several risk factors that can have a significant influence on maternal mortality. And this is classified according to the framework from McCarthy and Maine (1992) which consists of:

1. Close determinant

The process that is quite frequent and also close to maternal death is the pregnancy and complications during the pregnancy process. Coupled with the process of childbirth and the puerperium. Pregnant women are at risk for getting these complications which consist of:

- a. Pregnancy complications

Pregnancy complications such as preeclampsia or eclampsia and infection are one of the main factors of maternal death that often occur.

- b. Labor and puerperal complications

Complications that arise during labor and the puerperium are the main causes of maternal death. These complications usually occur during labor and also the period after delivery. Usually there is bleeding, stuck parts and infection from the trauma of childbirth

2. Intermediate determinant

The second factor is the determinant between which has several aspects, namely:

- a. Health status of pregnant women

The health status of pregnant women is one of the things that has an influence on maternal mortality. This includes nutrition, illness, anemia and a history of these complications.

- b. Reproductive Status

Reproductive status has a very important role in the incidence of maternal deaths such as the age of the pregnant woman and also the number and spacing of births. In addition, the marital status of the mother also has an important role. Mother's age under 20 years and over 35 years have a fairly high risk. These women have a high level of maternal risk due to pregnancy and birth.

- c. Health services

Access to health services is a risk factor. The affordability of the location of the health service place certainly has a big influence. Such as a location that is not strategic and also difficult for these pregnant women to reach. Health services and also the type and quality presented is one of the factors. Access to health care facilities can be seen from various factors. Contraceptive, antenatal and other health services must receive attention in order to reduce maternal and child mortality.

- d. Behavior of health service users

The behavior of using health service facilities itself consists of the behavior of the use of contraceptives followed by mothers in the family planning program. Antenatal care can also be used to detect health problems and complications received by pregnant women.

3. Distant Determinants

This determinant has an indirect nature in influencing maternal mortality. However, there are several factors, such as socio-cultural, economic, religious and other factors that must be taken into consideration in the implementation of detection and intervention to prevent maternal deaths. What is included as a far determinant is the status of women in society and also in the family. Another thing is the level of education, work that influences information and also education and attention from women to seek information about the pregnancies they experience. Low knowledge of pregnant women and their families is one of the reasons for the risk of these pregnant women.

Early pregnancy is one of the factors that can cause maternal death. Early pregnancy in adolescents is influenced by various factors such as psychosocial, socioeconomic and health status. Teenagers are still in the stage of searching for identity. When you decide to get pregnant, of course this can have a dangerous impact. And on average get the influence of several factors consisting of:

1. individual factors

This factor includes several experiences when dating to sexual activity with a partner. The lack of knowledge makes them have to accept that they find the condition of early pregnancy in these young women.

2. Environmental factor

These factors include communication about sexuality in the home and also very little education about sex in schools. Practically makes them feel curious when they enter puberty

3. Social behavior factors

This factor consists of minimal knowledge about the use of contraceptives that can reduce the risk of getting pregnant. This makes teenagers curious and must accept the risk.

Education is one of the factors of early detection in the process of pregnancy. And education is a domain in knowledge as well as attitudes that can influence individual behavior. Education of pregnant women and their partners can be an important factor in obtaining or seeking information and education regarding early detection of pregnancy. According to research that there is a relationship that is not too significant between the education of pregnant women and also pregnancy at an early age and early detection of pregnancy complications.

**2. METHODS**

This research on early detection of complications in pregnant women was conducted at the Siabu Health Center, Mandailing Natal Regency. In this study using cross-sectional study method. For the population in this research using purposive sampling technique, there are about 50 people. And these populations become respondents or informants in the research process.

While the data source for this research is primary data obtained directly from pregnant women through questionnaires distributed to respondents and informants. Other data obtained is by interviewing the respondents and informants. The secondary data in this study were obtained through the medical records of the respondents. The data analysis technique used is univariate and bivariate analysis.

**3. RESULTS AND DISCUSSIONS**

The study was conducted at the Sibau Community Health Center, Mandailing Natal District, with a population of about 50 pregnant women. And the results of the analysis are presented in tabular form with the information contained in the table.

**Table 2.** Characteristics Responden

No	Characteristics	Amount	Percentage
		F	%
<b>Age</b>			
1.	Less than 20 yrs	2	4
2.	20 to 35 years	39	78
3.	Over 35 years	9	18
<b>Parity</b>			
1.	Number 1	33	66
2.	2 to 4	15	30
3.	More than 5	2	4
<b>Education</b>			
1.	Elementary school	5	10
2.	Secondary school	12	24
3.	Upper Level School	17	34
4.	Diploma/S1	16	32
<b>Work</b>			
1.	Work	23	46
2.	Doesn't work	27	54

From the table above it can be seen that there are quite a large number of respondents aged 20 to 35 years which is the best age for pregnancy, childbirth and breastfeeding. 78% of the total population of respondents whose data was taken in the research process. Meanwhile, the highest number of parities was

in parity 1 where there were 33 respondents or 66%. Meanwhile, for the 2nd to 4th parity, there were around 15 respondents. For the 5th parity there are only about 2 respondents. Then for the level of education, the average education is Middle School, Senior level to Higher Education in this Siabu Health Center. Most of the respondents who studied high school. There are about 17 respondents. For junior high school education, there are around 12 respondents or 24% of the total population. Then for Higher Education there are around 16 respondents or 32%. For the employment sector, 23 respondents said they were still working. While 27 other respondents did not work.

**Table 3. Respondents**

No	Variable	Amount	Percentage
		F	%
<b>Pretest</b>			
1.	Capable	21	42
2.	Less fortunate	29	58
<b>Posttest</b>			
1.	Capable	38	76
2.	Less fortunate	12	24

The data or table above is a Pretest and also a Posttest conducted on respondents regarding the early detection of complications in pregnant women. In the Pretest variable, there were around 21 respondents who stated they were able to perform early detection of pregnancy complications they suffered. Meanwhile there were around 29 people or respondents with a percentage level of around 58% who said they were unable to carry out early detection.

After the posttest was carried out where the respondents received education and also information to attend classes for early detection of complications in pregnant women, it was found that there was an increase from 21 respondents to 38 respondents who stated that they were able to carry out early detection of complications problems in pregnant women. While the respondents who were unable to afford it decreased from 29 respondents to only 12. This provides evidence that education and information to respondents can help these pregnant women to make early detection of these complications.

Health services and also care for pregnant women are important factors to monitor and support the health of pregnant women. Apart from that, it can be a way to detect complications early that could happen to them. It is recommended for these pregnant women to carry out routine consultations with doctors or midwives in order to carry out early detection of the health of the mother and fetus. With regular consultations, of course, you can eliminate opportunities for high risks.

Examination and also supervision of pregnant women is of course needed and necessary. Its implementation is carried out continuously and continuously and regularly. The reason is that the examination and supervision can optimally prepare the physical and mental side of pregnant women and fetuses during pregnancy and also from childbirth to the puerperium. This is to prevent and reduce the risk of complications suffered. Plus to keep mothers and children healthy until the time of delivery and after delivery arrives.

There are various ways that can be done by health workers to help pregnant women in early detection of these complications. Starting from counseling that provides education and information to classes for pregnant women which is also a way to provide information to pregnant women with an age range of 4 to 36 weeks. Several methods, such as classes for pregnant women as well as counseling from the health center and routine visits to pregnant women, can make pregnant women get a complete education. In addition, pregnant women can discuss and exchange experiences regarding pregnancy and health conditions.

Counseling and also education must be carried out thoroughly and also systematically and in a scheduled manner. In addition, this program must be sustainable so that pregnant women receive comprehensive education on early detection of these pregnancy complications.

In this study it was described that the respondents who were the research subjects were in the age range of 20 to 35 years. This age range is a category group that has a small or low risk. Based on the narrative from Manuaba (2005) that this good and healthy reproductive age is at the age of 20 to 35 years. And at that age the risk of pregnancy complications occurring is indeed very small. Meanwhile, for those aged under 20 years and over 35 years, the risk of complications during pregnancy and childbirth is very large.

This research is in line with the theory which states that the reproductive age of 20 to 35 years is a very good age and also good for women to get pregnant, give birth and also breastfeed. The age of the women does have a considerable influence. The older the age, the mindset and understanding of a person or individual will be much better and more mature. Coupled with sufficient knowledge or education, the knowledge of an individual will be better.

This is closely related to the level of education. There are quite a lot of respondents who are educated in high school or high school and university. There were around 17 respondents who had high school education and 16 respondents who had education at tertiary institutions. While 12 respondents only had junior high school education. With this level of education, it can be known about the abilities and also the opportunities they have to get information and education as well as knowledge that is quite extensive regarding the side of childbirth and also pregnancy for women.

Higher education provides opportunities and possibilities for individuals to know and learn things related to pregnancy and childbirth for them. Especially those related to early detection of complications in pregnancy and childbirth. The ability of the individual himself is the potential of the individual to master expertise in doing things such as assignments and other things. Likewise, the ability to detect pregnancy complications early is a factor that should not be forgotten. This is of course related to the ability to detect complications from the pregnancy that occurs. One of the behaviors that pregnant women must have according to Prawirohardjo (2010) is the ability to detect complications early that can occur to them.

From the results of data analysis that was carried out through the pretest and posttest, it was found that there was a very significant influence regarding knowledge and early detection of complications in pregnancy before and after counseling, education and information was carried out through pregnant women classes, consultations and also counseling from the Sibau Health Center. Significant changes after getting information about early detection is evidence that education and information are very important.

The behavior of pregnant women themselves is a response and also a reaction that is obtained against the stimulus that appears. This is closely related to the efforts or efforts of someone who appears with the start of self-treatment by seeking help from other parties. And in general the behavior of individuals will be influenced by knowledge, facilities, knowledge to attitudes and also motivation based on the thoughts of Notoatmodjo (2012).

According to Wijayanti (2012), who has conducted research on the effectiveness of classes for pregnant women and counseling regarding early detection of pregnancy complications, shows that this is very important and also effective and efficient to improve the ability of pregnant women to carry out early detection of pregnancy, especially complications.

Meanwhile, the effect on the ability of pregnant women to detect dangerous risks such as preeclampsia is also determined from the information that pregnant women have. For pregnant women who do not have access or opportunities to obtain this information, they practically do not have concrete and complete data regarding complications that can endanger pregnancy, especially maternal and fetal death. In contrast to pregnant women who have knowledge and also have information about the level of risk. This can make it easier for pregnant women to detect early complications that could occur when entering labor.

Knowledge itself has a definition according to Notoatmodjo as human sensing and also the result of one's search for an object through the five senses possessed by these individuals. Knowledge plays a very important role in shaping the actions and behavior of a person. This is of course based on experience and research which states that behavior that is the basis of this knowledge has a longer lifetime than actions or behaviors that do not have a basis of knowledge.

Based on research from Komariyah (2020) that there are significant differences in knowledge between pregnant women in the second and third trimesters regarding pregnancy complications. Both this happened before and after counseling. Information and knowledge that has the right and correct basis and understanding can certainly have a significant and positive influence on the respondents. Moreover, it is closely related to knowledge about early detection of these pregnancy complications. Likewise, in the opinion of Ummah (2019) that pregnant women who recognize signs as a dangerous risk for their pregnancy, of course, will be much more vigilant about pregnancy. This becomes a lesson and experience for the next pregnancy process.



#### 4. CONCLUSION

There are influences from parity, education and also age which make the ability to detect early pregnancy complications occur at the Sibau Health Center in Mandailing Natal Regency. The effect of the lack of information and also education for pregnant women is one of the causes of high risk and also a red flag for pregnant women in determining and early detecting complications when pregnancy and childbirth arrive. Health and medical workers at the Community Health Center or Puskesmas can conduct counseling, provide education and also information through classes for pregnant women to the public, especially women who are in their pregnancies. Routine consultations and visits to pregnant women by health workers can facilitate the transfer of knowledge and provide complete information on how to detect complications early in these pregnant women.

#### ACKNOWLEDGEMENTS

Thanks to all those who have helped to finish this article and to my institution STIKES Namira Madina, Indonesia.

#### REFERENCES

- [1] Abdullah, C. A To Z 26 Tips for Managing a Family. Elex Media Kompetindo, Jakarta. 2007.
- [2] Republic of Indonesia Ministry of Health. Indonesia Health Profile 2014, Center for Health Data, 2014, Jakarta. 2014.
- [3] Republic of Indonesia Ministry of Health. Handbook for Recognizing Danger Signs, Labor and Postpartum, Jakarta. 2001.
- [4] Republic of Indonesia Ministry of Health. Indonesia Health Profile 2007, Center for Health Data, 2007. Jakarta. 2007.
- [5] Republic of Indonesia Ministry of Health. Guidelines for Monitoring Local Areas of Maternal and Child Health, Jakarta: Directorate General of Public Health and Directorate of Maternal Health Development, Ministry of Health of the Republic of Indonesia. 2009.
- [6] Republic of Indonesia Ministry of Health. Indonesian Health Demographic Survey, MOH RI. Jakarta. 2003.
- [7] Ida, SI, Afriani. (2021). The Influence of Classroom Education for Pregnant Women on Ability in Early Detection of Pregnancy Complications. Journal of Research Innovation Vol.2 No.2.
- [8] Jannah. (2012). *Midwifery Documentation Concept* . Yogyakarta: Ar-Ruzz Medika.
- [9] Indonesian Ministry of Health. (2015). *Indonesia Health Profile 2014* . Jakarta: Indonesian Ministry of Health.
- [10] Indonesian Ministry of Health. (2015). *Profile of the South Sulawesi Provincial Health Office 2014*. South Sulawesi: South Sulawesi Provincial Health Office.
- [11] Indonesian Ministry of Health. (2011). *Guidelines for Implementation of Classes for Pregnant Women*. Jakarta: Indonesian Ministry of Health
- [12] Ministry of Health of the Republic of Indonesia. (2015). Textbook of Maternal and Child Health. Pusdiklatnakes RI Ministry of Health.
- [13] Ministry of Health of the Republic of Indonesia. (2019). Indonesia Health Profile Data for 2019. Ministry of Health
- [14] Komariyah, S., Abdullah, WD (2020). Differences in Knowledge of Second and Third Trimester Pregnant Women about Pregnancy Complications Before and After Counseling. Journal of Midwifery, Vol.9 No.1 April 2020.
- [15] Manuaba Ida Ayu Chandrait, S. d. (2008). *Obstetric-Gynecology Emergency & Social Obstetrics-Gynecology for the Midwife Profession* (Vol. I). (M. Esther, Edit.) Jakarta: EGC Medical Book Publisher.
- [16] Manuaba. IBG. & Chandranita. F. Obstetrics, Gynecology and Family Planning for Midwife Education. Issue 2. EGC: Jakarta. 2005.
- [17] Manuaba. IBG. & Chandranita. F. Introduction to Obstetrics Lectures. EGC. Jakarta. 2007. Milman Yusdi . ( 2010 ). *Indonesian General Dictionary*. Jakarta: Sinar Library. Hope. Made Suarsana.

- [18] Nahar. S, Ban. M, Nasreen, Hasmina E. Women Focused Development Intervention Reduces Delay In Accessing Emergency Obstetric Care In Urban Slums In Bangladesh. BMC Pregnancy and Childbirth. 2011.
- [19] Notoatmodjo, S. (2011). Health Research Methodology. Jakarta: Rineka Cipta.
- [20] Notoatmodjo, S. (2012). *Health Promotion and Behavioral Sciences*. Jakarta: Rineka Cipta.
- [21] Notoatmodjo, S. (2014). Health Education and Behavior. Rineka Cipta. .
- [22] Nursalam. Concept and Application of Nursing Science Methodology. Salemba: Medical. Jakarta. 2008
- [23] Nurhayati. (2012). *Classes for pregnant women and steps for classes for pregnant women* . <http://ningindahklasibuhamil.blogspot.co.id/2014/06/klas-ibu-hamil-serta-step-steps.html> . in Access on 20 February 2018.
- [24] Nuryawati. (2016). *Relationship between pregnant women's class and knowledge of pregnant women about danger signs of pregnancy in Surawangi Village, UPTD Jatiwangi Health Center, Majalengka Regency*.
- [25] Peirrer K., Patricia E., Elena H. Increasing Hwareness of Danger Signs in Pregnancy Through Community-And Clinic Based Education in Guatemala. Maternal and Child Health Journal, 6; 1. 2002.
- [26] Prawirohardjo Sarwono, S. d. (2010). *Midwifery Science Sarwono Prawirohardjo* (Vol. III). (MS Prof. dr. Abdul Bari Saifuddin, Editor) Jakarta: PT. Library Development Sarwono Prawirohardjo.
- [27] Prawirohardjo, S. (2016). *Obstetrics*. Sarwono Prawirohardjo Library Development Foundation.
- [28] Saifuddin, AB National Reference Book for Maternal and Neonatal Health Services. Jakarta: Sarwono Prawirohardjo Library Development Foundation. 2002.
- [29] IDHS. Indonesia Demographic and Health Survey 2012, Central Bureau of Statistics. 2012, Jakarta. 2012.
- [30] Indonesian Health Demographic Survey (IDHS). 2017. Jakarta: BKKBN, BPS, Ministry of Health, and ICF International.
- [31] Ummah, DA, Kostania, G., (2019). Using a Text Messaging Program to Improve the Ability of Pregnant Women in Early Detection of Danger Signs of Pregnancy. Midwife Scientific Journal Vol.IV No.3
- [32] Wawan A, Dewi M.. (2010). *Theory and Measurement of Knowledge, Attitudes and Human Behavior*. Jakarta: Nuha Medika.
- [33] WHO. (2010). Profile of Women's Health and Development in Indonesia. Bhakti Husada
- [34] WHO. (2018). Maternal Mortality Rate and Infant Mortality Rate. World Bank, 2018.
- [35] WHO. Safe Motherhood, Eclampsia Module: Midwife Education Materials, Translated by: Qijayarini, M., EGC, Jakarta. 2002.
- [36] Wijayanti. (2012). *The effectiveness of pregnant women classes on early detection of danger signs of pregnancy in Kragilan Village, Mojosongo District, Boyolali Regency* . <http://download.portalgaruda.org/article.php?article=179238&val=426&title> . Accessed on 25 February 2018.
- [37] Yulanda S, Dewi LA (2014). Relationship Between Knowledge of Pregnant Women about Danger Signs of Pregnancy and Attitude of Early Detection of Pregnancy Complications at the Kartasura Health Center in 2014. Indonesian Journal of Midwifery, Vol. No. 1