

# KNOWLEDGE AND ATTITUDES OF PREGNANT WOMEN TOWARDS THE BEHAVIOR OF USING ULTRASONOGRAPHY IN PREGNANCY EXAMINATION AT THE MAIN INPATIENT CLINIC OF SRI HARTI SOEROSO, SURABAYA CITY

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## ABSTRACT

The highs and lows of the problem are caused by lack of knowledge and attitudes toward behavior of using ultrasound in pregnancy checks. Influencing factors are factors related to use by pregnant women, including knowledge, attitudes and behavior of pregnant women. The aim of this study was to determine the relationship between knowledge, attitudes and behavior of pregnant women and the use of ultrasound in pregnancy examinations. The aim of this research is to determine the level of knowledge of pregnant women about Ultrasonography and their use of behavior to support pregnancy examinations. This research uses descriptive research with a cross sectional approach located in the city of Surabaya, East Java. The research sample was 20 people taken using the Accidental Sampling technique. Data collection was carried out using a questionnaire. The data analysis technique used in this research is: *Chi – Square*. The results of this research show that 70% of pregnant women have good knowledge. The results of research in the attitude category were 65% in the good category, and the results of behavioral research were 55% in the good category regarding the use of ultrasound in pregnancy checks. The results of data analysis show that *p value* of 0.000 is less than 0.05, meaning there is a significant relationship between knowledge and attitudes in the behavior of using ultrasound. Based on the research results, it was concluded that the good knowledge possessed by pregnant women is supported by the attitudes and behavior of mothers who always carry out routine ultrasound examinations so that the health of the mother and fetus can be known well.

**Keywords :** Knowledge, pregnant women, USG, ANC

## INTRODUCTION

Problems that often occur in pregnant women include a lack of knowledge about the true importance and effects of obstetric ultrasound. This, in turn, may lead to low utilization of obstetric ultrasound or prevent a woman from being examined by obstetric ultrasound even in an emergency, even though obstetric ultrasound scanning improves pregnancy outcomes (Molla et al., 2022). There are many cases of pregnant and giving birth women who experience complications, one of the factors being that they never had an ultrasound. This is influenced by the lack of knowledge and behavior of pregnant women regarding the benefits of ultrasound (East Java Health Service, 2021).

Based on data from the Surabaya City Health Profile, there are many cases of pregnant and giving birth women experiencing complications, one of the factors being that they never had an ultrasound. Preliminary Survey in May 2021 at the Tanah Kali Kedinding Community Health Center, Surabaya City, of the 67 pregnant women who came to visit to check their pregnancy, only 28 pregnant women

(37.8%) had an ultrasound. The reason why mothers do not have an ultrasound is because of cost factors and the mother's low knowledge about the benefits of ultrasound (Surabaya Health Service, 2021). Data from the East Java Province Health Profile states that only around 30% of pregnant women undergo ultrasound influenced by the lack of knowledge of pregnant women about the benefits of ultrasound (East Java Health Service, 2021).

From the preliminary study data, it was obtained from 110 pregnant women who had an ultrasound examination in the Sri Harti Soeroso obstetric clinic area for the period January-October 2023, pregnant women who had received IEC regarding ultrasound knowledge and attitudes towards the use of ultrasound before carrying out an ultrasound examination were 80 pregnant women (72, 7%) who understand the use and use of ultrasound in pregnancy examinations. Based on short interviews in the Preliminary Study on September 25 2023 at the main Sri Harti Soeroso inpatient clinic, almost all pregnant women already know the benefits of ultrasound for pregnancy.

Knowledge about ultrasound in pregnancy checks is very important for pregnant women in the early to late trimesters, because knowledge can influence their attitudes and behavior in using ultrasound to determine the condition of the fetus inside and its development (Coilal et al., 2020).

The solution to be able to handle the above problems includes integrated AntenatalCare services which are provided to pregnant women periodically during pregnancy to prevent complications for the mother and fetus (Ririn Widyastuti, S.ST., 2021). Monitoring is carried out before having an ultrasound to find out how much knowledge and attitude the mother has regarding the use of ultrasound in each trimester because it is very influential in knowing the development of the fetus inside (Suryaningsih & Nirwana, 2022).

Based on the background above, researchers are interested in conducting research on "Knowledge and attitudes of pregnant women towards the behavior of using ultrasound in pregnancy examinations at the Sri Harti Soeroso Main Inpatient Clinic, Surabaya City.

## METHOD

The research design used in this research is an observational quantitative approach using methods *cross sectional*. The sampling technique used is *Total Sampling* with a sample of 20 people who met the inclusion and exclusion criteria from a total population of 30 people. In this study the independent variables were the knowledge and behavior of pregnant women and the dependent variable was the behavior of using ultrasound. The statistical test used is *chi square* with a value of  $\alpha = 0.000$ .

## RESEARCH RESULT

### A. General Data

Age	Frequency	Percentage (%)
≤ 25 Years	13	65
25-30 Years	5	25
≥ 30 Years	2	10
<b>Amount</b>	<b>20</b>	<b>100</b>
Education	Frequency	Percentage (%)
SD	-	-
JUNIOR HIGH SCHOOL	1	5
SMA	12	60
Diploma/Masters	7	35
<b>Amount</b>	<b>20</b>	<b>100</b>

Based on the table above, it shows that the age of pregnant women who undergo ultrasound examinations is known to most respondents aged <25 years, namely 13 (65%) respondents. It is known that the majority of pregnant women who underwent ultrasound examinations were high school graduates (60%).Custom Data

No	Knowledge of Pregnant Women	Frequency	Percentage (%)
1	Good	14	70

2	Enough	4	20
3	Not enough	2	10
<b>Amount</b>		<b>20</b>	<b>100</b>
<b>No</b>	<b>Attitude of Pregnant Women</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Positive	14	70
2	Negative	6	30
<b>Amount</b>		<b>20</b>	<b>100</b>
<b>No</b>	<b>Behavior, Utilization of Ultrasonography</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Good	15	75
2	Enough	4	20
3	Not enough	1	5
<b>Amount</b>		<b>20</b>	<b>100</b>

Based on the table above, it shows that the knowledge of pregnant women regarding the use of ultrasound in pregnancy is in the good category with 14 (70%) respondents. The attitude of pregnant women towards the use of ultrasound in pregnancy showed good category results for 15 (70%) respondents. The behavior of pregnant women towards the use of ultrasound in pregnancy was in the good category with 15 (75%) respondents.

## B. Cross Tabulation Results Between Independent and Dependent Variables

			Utilization of Ultrasonography in Pregnant Women			Total
			Not enough	Enough	Good	
Mother's Knowledge Pregnant	Not enough	Frequency	1	0	3	4
		%	5%	0%	15%	20%
	Enough	Frequency	0	3	3	8
		%	0%	15%	15%	30.0%
	Good	Frequency	0	1	9	8
		%	0%	5%	45%	50.0%
Total		Frequency	1	4	15	20
		%	5%	20%	75.0%	100%

The cross-tabulation results show that the majority of respondents have good knowledge so that 9 (45%) respondents can use ultrasound in pregnancy checks.

			Utilization of Ultrasound in Pregnant Women			Total
			Not enough	Enough	Good	
Attitude of Pregnant Women	Not enough	Frequency	1	2	2	5
		%	5%	10%	10%	25.0%
	Enough	Frequency	0	1	3	4
		%	0%	5%	15%	20.0%
	Good	Frequency	0	0	11	11
		%	0%	0%	55%	55.0%
Total	Frequency	1	3	16	20	
	%	5%	15%	80.0%	100%	

The results of the cross tabulation showed that almost all respondents had behavior in the good category so that 11 (55.0%) respondents could use ultrasound in pregnancy checks.

### C. Data analysis

Statistical Test Results <i>Chi Square</i>	
Variable	Significance Level
Knowledge of Pregnant Women	0.000
Attitude of Pregnant Women	
Ultrasound Utilization Behavior	

Results of research analysis on the relationship between knowledge, attitude and utilization behavior at the Sri Harti Soeroso clinic based on statistical results using *Chi-Square* the P value obtained was 0.000, which means there is a relationship between the knowledge of pregnant women and the attitudes and behavior of using ultrasound in pregnancy checks at the main inpatient clinic of Sri Harti Soeroso, Surabaya City, East Java, Indonesia.

## DISCUSSION

### A. Identification of Pregnant Women's Knowledge in the Use of Ultrasonography

Based on the research results, it was found that the majority of respondents had good knowledge, 14 respondents (70%), 4 respondents had sufficient knowledge (20%), and 2 respondents (10%) had poor knowledge. Knowledge is very important for a pregnant woman because if a pregnant woman does not have knowledge, it will have a big impact on pregnancy complications if she never has an ultrasound examination.

The results of this research are supported by research conducted by (Coilal et al., 2020) in which the research results state that knowledge has an important influence and having a positive attitude for the welfare of the baby in the womb so that complications do not occur during childbirth. The results of this research are in line with research conducted by Wahyuningsih in 2018 which found that the knowledge of pregnant women who were classified as high risk about the benefits and purposes of ultrasound was good knowledge, namely 85%, sufficient knowledge was 10%, and those with insufficient knowledge were 5%.

As a result of the facts and theories that have been explained, the researchers are of the opinion that knowledge about the use of ultrasound is important knowledge for mothers to have. This can be explained because respondents tend to act and behave according to the knowledge they have. So that knowledge of pregnant women regarding the use of ultrasound becomes a medium of control between health workers and pregnant women so that it will give a strong encouragement to pregnant women to make maximum use of ultrasound examinations. The use of ultrasound examinations can be optimal if health workers can provide education to mothers about the importance of ultrasound examinations in mandatory pregnancy checks.

Meanwhile, for pregnant women who still have insufficient knowledge about ultrasound, to increase their knowledge about ultrasound equipment, namely by providing education for every pregnant mother to carry out routine ANC checks as well as monitoring and evaluation (monitoring and evaluation) during pregnancy repeat visits. Consistent and widespread dissemination of education about ultrasound can significantly improve maternal knowledge and behavior, especially safe delivery for the health of the mother and child. Ultrasound examination can be an effective tool for detecting the condition of the fetus in the womb and for monitoring preparations for safe delivery and the health of the mother, newborn and child.

## **B. Identifying the Attitudes of Pregnant Women in Using Ultrasonography**

Based on the research results, it is known that the attitudes and behavior of pregnant women at the Sri Harti Soeroso Clinic are known to almost all respondents, namely 15 (75%) respondents in the good category. This is supported by the results of the questionnaire that pregnant women return for ultrasound examinations at the Sri Harti Soeroso clinic every month. And the attitude of using the mother when asking the doctor about the results of the examination, such as the development of the fetus and the sex of the baby, was diagnosed using an ultrasound device. Likewise, the mother's attitude in using ultrasound when the mother asks when the next ultrasound examination will be and in what trimester the gender will be visible, because there are pregnant women who only want to know the development of their fetus in each trimester.

As a result of the facts and theories that have been explained, the researchers are of the opinion that the attitude regarding the use of ultrasound is an important attitude for mothers to have. This can be explained because respondents tend to behave according to the knowledge they have. So that the attitude of pregnant women towards the use of ultrasound becomes a medium of control between health workers and pregnant women so that it will give a strong encouragement to pregnant women to make maximum use of ultrasound examinations. The use of ultrasound examination can be used as a medium for monitoring the development of the fetus internally and the mother can also see it clearly on the ultrasound screen.

## **C. Identifying the behavior of using ultrasound in pregnancy examination**

As a result of the facts and theories that have been explained, the researchers are of the opinion that the attitude regarding the use of ultrasound is an important attitude for mothers to have. This can be explained because respondents tend to behave according to the knowledge they have. So that the attitude of pregnant women towards the use of ultrasound becomes a medium of control between health workers and pregnant women so that it will give a strong encouragement to pregnant women to make maximum use of ultrasound examinations. The use of ultrasound examination can be used as a medium for monitoring the development of the fetus internally and the mother can also see it clearly on the ultrasound screen.

Efforts are also being made to improve the healthy behavior of pregnant women to prevent maternal and fetal deaths. One of the healthy behaviors of pregnant women regarding the use of ultrasound in pregnancy examinations includes acceptance of physical and psychological changes, pregnancy examinations, safe and comfortable sexuality, overcoming mild discomfort, knowing danger signs, third trimester nutrition, maintaining general hygiene, maintaining the use of Fe medication, preparing for the birth of a fetus, breastfeeding, and becoming a parent (Indonesian Ministry of Health, 2022).

As a result of the facts and theories that have been explained, the researcher believes that it is important for every pregnant mother to have knowledge about ultrasound examinations so that they can behave positively, trust and utilize ultrasound for mandatory examinations in pregnancy, so that they can monitor the development of fetal weight, fetal location, gender, and frequency of amniotic fluid every month. Ultrasound can be used as an accurate examination to determine safe and risk-free delivery preparations.

## **D. Analysis of the Level of Knowledge and Attitudes towards the Behavior of Using Ultrasonography in Pregnancy Examinations**

The results of the research analysis regarding the relationship between knowledge and attitudes and behavior in the use of ultrasound in pregnancy examinations at the Sri Harti Soeroso clinic, based on statistical tests using the Chi-Square test in table 4.5, obtained the result  $p = 0.000$ , so the test results *chi square* The P value obtained was 0.000, which means there is a relationship between knowledge and attitudes towards the use of ultrasound at the Sri Harti Soeroso main inpatient clinic.

Based on the results of the cross tabulation between knowledge and behavior of pregnant women at the Sri Harti Soeroso Clinic, it is known that the majority of respondents were in the good knowledge category, namely 9 (45.0%) respondents in the good category. Notoatmodjo (2019), said that increasingly

With sufficient knowledge, a person's level of maturity and strength is more mature in thinking and taking action, in this case the health behavior of pregnant women that must be carried out to maintain and improve the health and welfare of the mother and fetus. The older a person gets, the more their understanding and thinking patterns develop so that the knowledge they gain gets better.

Based on the results of the cross tabulation between the attitudes and behavior of pregnant women at the Sri Harti Soeroso Clinic, it is known that the majority of respondents were in the positive (good) category, namely 11 (55.0%) respondents in the good category. Notoatmodjo (2019), said that in general the higher a person's knowledge, the easier it is to receive information and respond to news positively. The more information you receive, the more you understand how to have a positive attitude towards the insights you gain about health. This will form a positive attitude in the mother, especially the attitude towards using ultrasound in pregnancy checks. Likewise, a negative attitude will also hinder a person's development of newly introduced values and respond well to them.

As a result of the facts and theories that have been explained, the researchers are of the opinion that the knowledge and attitudes of pregnant women regarding the behavior of using ultrasound for pregnancy checks are important for pregnant women to have. This can be explained because respondents tend to act and behave according to the knowledge they have. So that knowledge of pregnant women regarding the use of ultrasound becomes a medium of control between health workers and pregnant women so that it will give a strong encouragement to pregnant women to make maximum use of ultrasound examinations. The use of ultrasound examinations can be optimal if health workers can provide education to mothers about the importance of ultrasound examinations in mandatory pregnancy checks.

## CONCLUSION

Based on the results of research and descriptions of discussions conducted by researchers regarding the relationship between knowledge and attitudes of pregnant women towards the behavior of using ultrasound in pregnancy examinations at the Sri Harti Soeroso Main Inpatient Clinic, Surabaya, it was concluded that the majority of pregnant women's knowledge of the use of ultrasound was in the good category, 14 (70%). ), pregnant women with sufficient knowledge about ultrasound were 4 (20%) and mothers with insufficient knowledge were 2 (10%). The majority of pregnant women's attitudes towards ultrasound were in the good category, 15 (75%) and the distribution in the poor category was 5 (25%). Most of the behavior of pregnant women in using ultrasound was in the good category, 15 (75%), in the adequate category, 4 (20%) respondents, and in the poor category, 1 (5%). There is a relationship between knowledge and attitudes and behavior in using ultrasound in pregnancy examinations (0.000) at the Sri Harti Soeroso Main Inpatient Clinic, Surabaya.

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