



**FACTORS THAT AFFECTED PREGNANT WOMANS
TO DO ULTRASONOGRAPHIC TEST DURING PREGNANCY**

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ABSTRACT

Pregnancy check-ups are mandatory for pregnant women to know the progress of pregnancy, the level of health of the womb, the condition of the fetus, and even diseases or abnormalities in the womb that are expected to be treated early. As many as 99% of maternal and infant deaths due to labor or birth problems occur in developing countries, while the maternal mortality rate (MMR) and infant mortality rate (IMR) are caused by pregnancy complications, pregnancy complications and this is due to low visits by pregnant women (Antenatal Care). so that these complications are not detected early. One of these services is an ultrasound examination, which is an examination carried out if there is an indication, then an ultrasound examination is carried out to determine the presence of complications in pregnancy. Examination using ultrasound is seen as one of the methods of examination that is safe, practical, and the results are accurate enough to detect complications early. The purpose of this study was to find out what factors can influence pregnant women to perform ultrasound examinations including maternal knowledge, family support and support from health workers. This research is an analytic correlation study with a cross sectional approach. The sample consisted of 62 pregnant women respondents. As a data collection tool used a questionnaire sheet. Data analysis using bivariate analysis with chi square test with the results of the r value on the question item above 0.05. From the results of the study, it was found that there was a significant influence between the level of knowledge, p value = 0.001, family support factor p value = 0.004, health worker factor p value = 0.020 with the choice of ultrasound examination with a value (p < 0.05). It can be concluded that the level of knowledge, family support factors, health workers factors affect the motivation of pregnant women to check their pregnancy using ultrasound.

Keywords: pregnant womans; pregnancy; usg test

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INTRODUCTION

Pregnancy check-up is an important stage and must be carried out by pregnant women to maintain a healthy pregnancy. By carrying out a pregnancy check, pregnant women can find out the progress of pregnancy, the level of health of the womb, the condition of the fetus, and even diseases or abnormalities that can happen in the womb that are expected to be treated early. (RS Hermina Pekalongan, 2020). Pregnancy check-ups are part of Antenatal Care (ANC). ANC will prevent various problems that occur during pregnancy including the risk of maternal death due to pregnancy.(Manuaba, 2013)The predisposing factors affect the compliance of pregnant women in conducting ANC visits includes the following: Age, . Education level, Paritas, Profession, the pregnancy gap and level of knowledge(Ayu Indah Rachmawati et al., 2017).

ANC includes a variety of services, which contain: anamnesis, physical examination and supporting examinations. (Ministi & Junga, 2017) Although currently the Maternal Mortality Rate has decreased, this figure is still far from the SDG's target. Based on data from the World Health Organization (WHO) in 2017, as many as 500,000 women died during to labor. As many as 99% of maternal and infant deaths during the labor happened in developing countries. Mean while in 2015 there is 81% maternal mortality rate (MMR) and infant mortality rate (IMR) happened because of pregnancy complication that actually can be prevent or detected earlier by doing antenatal care visit during pregnancy (Dinarohmayanti, 2018)

Based on this situation, it is important for pregnant women to carry out ANC examinations and in the implementation of ANC one of the examinations carried out is an Ultrasonography (USG) examination, which is an examination carried out if there is an indication to find out any complications in pregnancy. Ultrasound is a diagnostic method using ultrasonic waves reflected by the tissue (Wiknjosastro H, 2016). Examination using ultrasound is seen as a method of examination that is safe, practical, and the results are accurate enough to detect complications early. Doctors or health workers will usually perform an ultrasound examination for the following reasons: to identify early pregnancy; to show the size and rate of growth of an embryo or fetus; to measure the fetal head, abdomen or thighs to determine the duration or duration of pregnancy; to identify certain fetuses with Down's Syndrome; to identify fetal abnormalities, such as hydrocephalus; to identify the location, size, maturity of the placenta or placental abnormalities; approach the IUD; to distinguish between miscarriage and ectopic pregnancy (pregnancy outside the uterus) (Nawangwulan, 2016). The use of obstetric ultrasound in developed countries become one of the standard services that used to identify anatomy and pregnancy pathologies, such as the position of the placenta, fetal position, ectopic pregnancy, number of pregnancy, and fetal survival. If any complications are identified, it can be faster handling and planned (Ingan Tarigan et al., 2020)

According to Tucker (2015), ultrasound examination is usually for routine evaluation of the fetus, through antepartum monitoring and testing performed when suspicious signs are found or when high-risk problems are indicated. However, the reality in the field is that pregnancy tests using ultrasound are often carried out without any indication because they are based on their own request. So, pregnant women in pregnancy examination using ultrasound there is a motivation that influences it, namely intrinsic motivation and extrinsic motivation. Intrinsic motivation is the motivation that arises does not need to be stimulated from the outside, because in every individual there is an urge to do something. Extrinsic motivation is motivation that arises because there are external stimuli, for example motivation that comes from family support is the attention of family members in checking their pregnancy, a health worker is a person who has the right to recommend pregnant women to check using ultrasound because they have knowledge and are experts in that field.

The location of this research was carried out in the working area of the Lerep Health Center because based on a preliminary study there were pregnant women who requested an ultrasound examination even though there was no indication, this was possible due to exposure to current technology. The purpose of this research is To find out the factors that influence pregnant women to do an ultrasound test during their pregnancy and also to describe knowledge of pregnant women, family support and health workers support and to know the correlation between the knowledge, family support, health workers support with with ultrasonographic test during pregnancy

METHOD

This research is an analytic correlation study with a cross sectional approach(Adiputra, 2021). The sample consisted of 62 pregnant women respondents. As a data collection tool used a questionnaire sheet. The questionnaire has been tested for validity and reliability and has been declared valid. Respondents were pregnant women in the working area of the Lerep Public Health Center, before filling out the questionnaire it was explained that this study would be kept confidential, and the respondents had explained the risks of this research and agreed by filling out the informed consent form. Data analysis using bivariate analysis with chi square test

RESULTS

Level Of Knowledge

Table 1.

Frequency Distribution Pregnant Womans Do an Ultrasonographic Test During Pregnancy

Knowledge	f	%
Low level	5	8,1
Medium level	47	75,8
High level	10	16,1

Table 1 it can be seen that the level of knowledge of Pregnant Womans who use ultrasound at the Lerep Ungaran Primary Health Care mostly has a moderate level of knowledge which is 47 Person or 75,8%.

Family Support

Table 2.

Frequency Distribution Pregnant Womans Do an Ultrasonographic Test During Pregnancy

Family Support	f	%
Not Supporting	24	38,7
Supporting	38	61,3

Table 2 it can be seen that most families support pregnant womens at the Lerep Ungaran Primary Health Care to do Ultrasonographic Test During Pregnancy, which is 38 person or 61,3%.

Healthcare Workers

Table 3.

Frequency Distribution Pregnant Womans Do an Ultrasonographic Test During Pregnancy

Healthcare Workers	f	%
Never give an Information about USG	33	53,2
Always give an Information about USG	29	46,8

Ultrasonographic Test Option

Table 4.

Frequency Distribution Pregnant Womans Do an Ultrasonographic Test During Pregnancy

Ultrasonographic Test Option	f	%
No	12	19,4
Yes	50	60,6

Table 4, the results shows that most pregnant women carry out their pregnancy checks using Ultrasonographic Test During Pregnancy in Lerep Primary Health Care which is 50 person or 60,6%.

Level of Knowledge Faktor and Preference to Do Ultrasonographic Test

Table 5.

The Influence of level of knowledge with the preference to do ultrasonographic test

			Preference to do USG test		Total	X2	P
			yes	No			
Level Of Knoledge	Low	Count	4	1	5		
	Level	% of Total	6,45 %	1,61 %	8,06 %		
	Medium	Count	41	6	47		
	Level	% of Total	66,12%	9,70%	75,82%	13,091	0,001
	High	Count	2	8	10		
	Level	% of Total	3,22%	12,90 %	16,12%		

Table 5, it can be seen that the choice to do ultrasonographic Test is mostly at the moderate level of knowledge by 47 respondents (75.8%) consisting of pregnant women who did an ultrasonographic Test by 41 respondents (66.1%) and pregnant women who did not have an ultrasonographic Test by 6 respondents (9.7%). While the preference to do an ultrasonographic Test at least with low knowledge of 5 respondents (8.1%) consisting of pregnant women who did not check with ultrasound by 1 respondent (1.6%) and pregnant women who checked with ultrasonographic Test by 4 respondents (6.5%). The results of the analysis with the SPSS 15.00 windows program obtained a calculated chi square value of 13.091 with a probability of 0.001 seen from the probability value indicating that the probability value is smaller than the level of significance 5% ($0.001 < 0.05$) meaning H_0 is rejected and H_a is accepted. So it can be concluded that the level of knowledge has a statistically significant effect between knowledge and the choice of ultrasonographic Test at the Lerep Ungaran Primary Health Care.

Faktro of Family Support and Choice of Factors of Family Support and Choice Ultrasonographic Test

Tabel 6.

The Influence of Family With The Prefence Of Ultrasonographic Test at Lerep Ungaran Primary Health Care

			Preference of USG Test		Total	X2	P
			No	Yes			
Family Support	Not Supporting	Count	9	15	24		
		% of Total	14,5%	24,2%	38,7%		
	Supporting	Count	3	35	38	8,260	0,004
		% of Total	4,8%	56,5%	61,3%		

Table 6 it can be seen that the preference to do Ultrasonographic Test is mostly based on the family support factor that supports 38 respondents (61.3%) consisting of pregnant women

who check with ultrasound by 35 respondents (56.5%) and pregnant women who do not checked with ultrasound by 3 respondents (4.8%). While the choice of ultrasonographic Test is at least on the family support factor that does not support it by 24 respondents (38.7%) consisting of pregnant women who check with ultrasonographic Test by 15 respondents (24.2%) and pregnant women who do not check with ultrasonographic Test by 9 respondents (14.5%). The results of the analysis with the SPSS 15.00 windows program obtained a calculated chi square value of 8.260 with a probability of 0.004 seen from the probability value indicating that the probability value is smaller than the level of significance 5% ($0.004 < 0.05$) meaning H_0 is rejected and H_a is accepted. So it can be concluded that the family support factor has a statistically significant effect between the family support factor and the preference to do ultrasonographic Test at the Lerep Ungaran Primary Health Care Center

Factors of Health Care Workers and the Preference to Do Ultrasonographic Test

Table 7.

Effect of health care workers with the Preference to do ultrasonographic Test

			Preference to do USG Test		Total	X2	P
			No	Yes			
Health Care Workers	Never provide Information	Count	10	23	33		
		% of Total	16,1%	37,1%	53,2%		
	Always provide information	Count	2	27	29	5,418	0,020
		% of Total	3,2%	43,5%	46,8%		

Table 7 it can be seen that the Preference to do ultrasonographic Test is mostly on the factor of health workers who never provide information by 33 respondents (52.2%) consisting of pregnant women who check with ultrasound by 23 respondents (37.1%) and pregnant women who did not check with ultrasound were 10 respondents (16.1%). While the choice of ultrasound examination is the least on the factor of health workers who always provide information by 29 respondents (46.8%) consisting of pregnant women who check with ultrasound by 27 respondents (43.5%) and pregnant women who do not check with ultrasound by 2 respondents (3.2%). The results of the analysis with the SPSS 15.00 windows program obtained a calculated chi square value of 5.418 with a probability of 0.020 seen from the probability value indicating that the probability value is smaller than the level of significance 5% ($0.020 < 0.05$) meaning H_0 is rejected and H_a is accepted. So it can be concluded that the health worker factor has a statistically significant influence between the health worker factor and the choice of examination with ultrasound at the Lerep Ungaran Health Center.

DISCUSSION

This section will discuss the results of the study in accordance with the research objectives, namely the factors that influence pregnant women in checking their pregnancy using ultrasound at the Lerep Ungaran Primary Health Care Center which includes the level of knowledge, family support and health workers. Based on the results of the study, it showed that the respondents had a low level of knowledge, namely 5 respondents (8.1%), 47 respondents (75.8%) and 10 respondents (16.1%) high for having their pregnancy checked using ultrasound. Based on data from the results that have been researched at the Lerep Health Center Ungaran. Of the 5 respondents who had low knowledge, there were 4 respondents who examined using ultrasound, this was because the respondents did not really understand the benefits of examination using ultrasound and lack of information about examination using

medical ultrasound. 1 respondent did not check with ultrasound because in addition to expensive ultrasound fees, the mother stated that she had not been able to carry out pregnancy tests with ultrasound in view of her husband's work. Of the 47 respondents who had moderate knowledge, there were 6 respondents who checked using ultrasound. This is because the mother stated that she wanted to know the sex of her baby, and to know the development of the baby. Knowledge of pregnant women about The benefits of ultrasound during pregnancy have good knowledge. Respondent the majority enter into the reproductive age healthy. The level of education of the respondents is classified as to the level of higher education, the majority respondents become housewives and have previous experience for do ultrasound(Lady Tioro Coilal et al., 2020).

Some mothers stated that it was the first time they had an ultrasound. 41 respondents did not or have not checked with ultrasound because some mothers already know the benefits of previous ultrasound examinations. In addition to the cost being considered for checking with ultrasound, the mother stated that there was no recommendation from the doctor or midwife. Of the 10 respondents who had high knowledge there were 2 respondents who checked with ultrasound because the doctor stated that the mother had an indication that the mother required for ultrasound, and 8 respondents did not check with ultrasound because the mother felt it was not necessary to do ultrasound because there was no indication and Doctors also don't recommend ultrasound. From the research that has been done by Megawati, it shows that mothers who have level knowledge low possibility no influence To do inspection ANC compared to mother who has high level of knowledge(Megawati Sinambela & Eva Solina, 2021).

The moderate level of knowledge is an indication of a positive respondent's understanding of the importance of having a pregnancy check-up using ultrasound. This is in accordance with the opinion of Notoatmodjo (Prof.Dr. Soekidjo Notoatmodjo. S.K.M., 2018)that knowledge is an important element in the formation of a person's attitude to take a certain action. Thus it can be said that there is a tendency where the better a person's knowledge, the better the awareness of the importance of having her pregnancy checked using ultrasound. From the results of the study, it can be assumed that it is important to increase knowledge about antenatal care using ultrasound in order to form good/positive motivation and action. (Saifuddin Azwar, 2013)Based on the results of the study, most of the respondents did not have family support as many as 38 (61.3%) and who received family support as many as 24 (38.7%). Of the 24 respondents who received family support, there were 9 respondents who checked using ultrasound. This is because the family wants to know the development of the baby and wants to know the sex of the baby and there are some respondents who are required by the doctor for an ultrasound because there is an indication and 15 respondents who did not check with ultrasound because the mother does not need to do an ultrasound and the cost factor is also a consideration of the 38 respondents who did not receive family support, there were 3 respondents who checked using ultrasound because they received advice from the doctor and the respondents also wanted to see the development of their baby. There are 35 respondents who did not check with ultrasound, this is because the respondents did not have any indications and recommendations from doctors, it was expensive to conduct an ultrasound examination and respondents stated that they had done ultrasound with normal results, so respondents chose not to do ultrasound.

According to Tahir(Muhammad Tahir et al., 2018) one of the factors that influence motivation is the factor of family support. Pregnant women who ask to have their pregnancy checked using ultrasound based on family support can be influenced by external encouragement,

namely respect and respect for parents by being patient and wise with their pregnancy behavior. Because of the support from the family for pregnant women to check their pregnancy so as to encourage mothers to regularly maintain their health, pregnancy, and prevent complications, pregnant women request an ultrasound examination because of family support. Although in the ultrasound examination the mother does not know what the benefits and uses of ultrasound examination are, the mother should be more considerate in deciding to ask for a pregnancy examination using ultrasound, namely if there are indications in the examination. (Lies Indarwati, 2010)

From the results of the study, it was found that 33 respondents (53.2%) had checked their pregnancy using ultrasound and never got any information from health workers, but 10 respondents did an ultrasound because they wanted to know the condition of their baby, to know the sex of the baby, 23 respondents who did not do an ultrasound examination because respondents already knew when ultrasound should be done and ultrasound was also expensive compared to ANC or pregnancy check-ups at a midwife, 29 respondents (46.8%) checked their pregnancy using ultrasound and always received information from health workers. There were 2 respondents who did an ultrasound examination because the respondent was required to do an ultrasound examination because there was an indication or doctor's recommendation. There were 27 respondents who did not do an ultrasound examination because the mother really understood the information provided by the doctor about the benefits and uses of ultrasound, so in addition to the respondents stating that there was no need for ultrasound, the high cost of conducting an ultrasound examination was also a consideration. by the respondent. According to Notoatmojo (Prof. Dr. Soekidjo Notoatmodjo. S.K.M., 2012) factors that influence motivation, one of which is the factor of health facilities here, health workers.

Health workers are people who are educated, have knowledge about health and understand the treatment that must be carried out on pregnant women. In maintaining her health, and has the authority to carry out pregnancy checks. Based on the results obtained, it can be seen that most of the health workers never provide information in pregnancy examinations using ultrasound. This is because in carrying out an examination using ultrasound there must be an indication. Examination using ultrasound should be explained what the benefits and uses of the examination. From the research results obtained, most of the respondents 50 (80.6%) who checked their pregnancy using ultrasound and 12 respondents (19.4%) pregnant women did not use ultrasound.

CONCLUSION

There is a statistically significant effect between family support factors and the choice of ultrasound examination. There is a statistically significant effect between the health care worker factor and the Preference of Ultrasonographic Test.

REFERENCES

- Adiputra, I. M. S. (2021). *Metodologi Penelitian kesehatan*. Yayasan Kita Menulis.
- Ayu Indah Rachmawati, Ratna Dewi Puspitasari, & Eka Cania. (2017). Faktor-faktor yang Memengaruhi Kunjungan Antenatal Care (ANC) Ibu Hamil. *Medical Jurnal of Lampung University*, 7(1), 72–76.
- Dinarohmayanti, D. (2018). No Title Faktor – Faktor Yang Berhubungan Dengan Motivasi Ibu Hamil Melakukan Kunjungan Antenatal Care Di Puskesmas Kauditan Kecamatan Kauditan Kabupaten Minahasa Utara. *Jurnal Ilmiah Bidan*, 2(2), 34–40. <https://doi.org/https://doi.org/10.47718/jib.v2i2.313>

- Ingan Tarigan, Soewarta Kosen, & Tin Afifah. (2020). Peningkatan Kunjungan Ibu Hamil Di Puskesmas Sebagai Efek Digunakannya Ultrasound pada Pemeriksaan Kehamilan . *Jurnal Kesehatan Reproduksi*, 10(2), 141–152.
- Lady Tioro Coilal, Legina Anggraeni, & Irwanti Gustina. (2020). Gambaran Tingkat Pengetahuan Ibu Hamil tentang Manfaat Ultrasonografi (USG) DALAM PEMERIKSAAN KEHAMILAN . *Binawan Student Journals*, 2(2), 242–245.
- Lies Indarwati. (2010). Faktor-Faktor yang Mempengaruhi Motivasi Ibu Hamil untuk Memeriksa Kehamilannya Dengan Menggunakan Usg Di Poliklinik Kandungan Bprsud Salatiga Tahun 2008. *Kebidanan*, 2, 52–60.
- Manuaba. (2013). *Gawat-Darurat Obstetri-Ginekologi dan Obsteri Ginekologi Sosial untuk Profesi Bidan* (EGC (ed.)).
- Megawati Sinambela, & Eva Solina. (2021). Analisis Faktor - Faktor yang Mempengaruhi Ibu Hamil terhadap Pemeriksaan Antenatal Care (Anc) Selama Pandemi Covid-19 Di Puskesmas Talun Kenas Tahun 2020. *Jurnal Kebidanan Kestra*, 3(2), 128–135.
- Ministi, & Junga, R. (2017). Faktor - Faktor yang Berhubungan Dengan Keteraturan Pemeriksaan Antenatal Care (ANC) Ibu Hamil Trimester III Di Puskesmas Ranotana Weru Kota Manado. *Keperawatan*, 5(1). <https://doi.org/https://doi.org/10.35790/jkp.v5i1.14690>
- Muhammad Tahir, Hasnah, & Sarmilawati. (2018). Faktor-Faktor Yang Berhubungan Dengan Motivasi Ibu Hamil untuk Memeriksa Kehamilan . *Jurnal Ilmiah Kesehatan Pencerah*, 7(1), 28–36.
- Prof.Dr. Soekidjo Notoatmodjo. S.K.M., M. C. H. (2012). *Promosi Kesehatan dan Perilaku Kesehatan edisi Revisi*. PT. Rineka Cipta.
- Prof.Dr. Soekidjo Notoatmodjo. S.K.M., M. C. H. (2018). *Metodologi Penelitian Kesehatan*. PT. Rineka Cipta.
- RS Hermina Pekalongan. (2020). *Pentingnya USG saat Hamil*. <https://www.herminahospitals.com/id/articles/pentingnya-usg-saat-hamil>
- Saifuddin Azwar. (2013). *Sikap Manusia: Teori dan Pengukurannya* (2nd ed.). Pustaka Pelajar.
- Wiknjastro H. (2016). *Ilmu Kebidanan* (4th ed.). PT. Bina Pustaka Sarwono Prawirohardjo.