KNOWLEDGE AND ATTITUDE OF PREGNANT WOMEN ABOUT MALARIA WITH BEHAVIOR TO SEEK MALARIA TREATMENT

Pasnel Parna Wemy Gultom[1], Jenie Palupi[2], Yuniasih Purwaningrum[3*], Syiska Atik Maryanti[4]

[1,2,3,4] Applied Science Undergrad Program in Midwivery Jember
*Correspondence email yuniasih.purwaningrum56@gmail.com

ABSTRAK : PENGETAHUAN DAN SIKAP IBU HAMIL TENTANG MALARIA DENGAN PERILAKU UNTUK MENCARI PENGOBATAN MALARIA

Latar Belakang: Papua merupakan daerah endemik malaria dengan tingginya kasus malaria pada anak balita dan ibu hamil. Namun, kurangnya sosialisasi dan minat mencari tahu tentang malaria dan cara pengobatannya membuat penyakit malaria masih dianggap sebagai penyakit yang biasa oleh masyarakat di wilayah endemis malaria. Kasus malaria secara global mencapai 219 juta pada tahun 2017, dengan 435.000 kasus dikaitkan dengan malaria, di Indonesia, Profil Kesehatan Kabupaten Sarmi tahun 2017, 31.068 kasus pasien malaria. Kabupaten Sarmi kasus ibu hamil yang terinfeksi Malaria pada tahun 2010 sebanyak 260 orang (1,5%) dengan jumlah penduduk 41.515 jiwa.

Tujuan: Studi ini dilakukan untuk mengetahui hubungan pengetahuan dan sikap tentang malaria dengan perilaku ibu hamil untuk mencari pengobatan malaria dalam kehamilan di Puskesmas Samanente Kabupaten Sarmi.

Metode: yang digunakan dalam penelitian ini yaitu metode analitik korelasional dengan pendekatan desain penelitian *cross-sectional* dengan menggunakan teknik *simple random sampling* sebanyak 30 orang. Instrumen penelitian yang digunakan yaitu menggunakan kuesioner. population in this study 30 people, this research used sampling technique Total Sampling with sampling 30 people. Inclusion criteria on this research is Willing to be a respondent, Mothers who are pregnant and currently or have suffered from malaria, Can read and write. Criteria exclusions in this study are Pregnant women who are sick at the time of the study, Pregnant women with Auto Immune, Pregnant women with pregnancy complications

Hasil: didapatkan responden dengan pengetahuan sedang yang tidak memiliki kebiasaan berobat malaria pada kehamilan adalah 56,3% dan kelompok responden dengan pengetahuan baik yang tidak memiliki kebiasaan berobat malaria pada kehamilan adalah 71,4%. Hal ini menunjukkan bahwa semakin tinggi tingkat informasi dapat meningkatkan proporsi perilaku tidak mencari pengobatan malaria selama kehamilan yaitu sebesar 15,1%. Hasil analisis menunjukkan bahwa tidak ada hubungan antara tingkat pengetahuan dan perilaku ibu hamil dalam mencari pengobatan malaria ($P > 0.05$). Ada hubungan antara sikap ibu hamil tentang malaria dan perilaku ibu hamil dalam mencari pengobatan malaria ($P < 0.05$).

Kesimpulan: Meningkatnya pengetahuan dapat meningkatkan kesadaran ibu tentang penyakit malaria dan sikap yang baik dapat meningkatkan kewaspadaan terhadap penyakit malaria.

Saran: menganjurkan ibu hamil untuk rutin melakukan kunjungan kehamilannya di Puskesmas agar dapat meningkatkan pengetahuan dan sikap tentang malaria dengan perilaku mencari pengobatan malaria dalam kehamilan.

Kata Kunci : Malaria dalam kehamilan,Pengetahuan, Pengobatan malaria, sikap dan perilaku,

ABSTRACT

Background: Papua is a malaria endemic area with high malaria cases among children under five years and pregnant women. However, the lack of socialization and interest in finding out about malaria and how to medicate it makes malaria still considered a common disease by the people in malaria endemic areas. Malaria cases globally reached 219 million in 2017, with 435,000 cases attributed to malaria, in Indonesia, the Sarmi District Health Profile in 2017, 31,068 cases of malaria patients.Sarmi Regency cases of pregnant women infected with Malaria in 2010 were 260 people (1.5%) with a total population of 41,515 residents.

Method: To ascertain the association between knowledge and attitudes about malaria and the behavior of pregnant women to seek treatment for malaria in pregnancy at Samanente Public Health Center, Sarmi Regency, a cross-sectional, correlational analysis study was carried out. The instrument was a questionnaire, with a sample size of 30 respondents, obtained using a simple random sampling method. population in this study 30 people, this

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research used sampling technique *Total Sampling* with sampling 30 people. Inclusion criteria on this research is Willing to be a respondent, Mothers who are pregnant and currently or have suffered from malaria, Can read and write. Criteria exclusions in this study are Pregnant women who are sick at the time of the study, Pregnant women with Auto Immune, Pregnant women with pregnancy complications

Results: it was found that respondents with moderate knowledge who did not have the habit of seeking malaria treatment in pregnancy were 56.3% and the group of respondents with good knowledge who did not have the habit of seeking malaria treatment in pregnancy was 71.4%. This indicates that having a greater degree of information can improve the proportion of behavior for not seeking malaria treatment during pregnancy, which is 15.1%. The study found no correlation between pregnant women's knowledge level and behavior in seeking treatment for malaria (*P*>0.05). On the contrary, there was a significant correlation between pregnant women's attitudes toward malaria and their behavior in seeking malaria treatment (*P*<0.05).

Conclusion: Improved knowledge is associated with increased maternal awareness of malaria, and positive attitudes can help raise awareness of malaria. It is to be expected that pregnant women who seek treatment for malaria will have a greater understanding of the disease and a more positive attitude toward it.

Suggestion: We propose that pregnant women should be required to regularly visit the health center for prenatal care examinations in order to enhance their understanding and attitudes toward malaria by obtaining malaria medication during pregnancy.

Keywords : Malaria in pregnancy, Knowledge,Malaria treatment, attitude and behavior

INTRODUCTION

Malaria is an infectious illness according to Budiyanto & Wuriastuti 2017, Niu Flora 2018 Malaria is an infectious illness that remains to be a public health concern in substantially all tropical countries, primarily amongst high-risk groups such as infants, children under the age of five, and pregnant women (Budiyanto & Wuriastuti, 2017). The serious consequence that can arise in pregnant women since this condition will not only affects pregnant women but can also impair the fetus in the mother's womb and potentially lead to the demise for both mother and fetus (Niu Flora, 2018). Up to the present, Malaria is still one Malaria is one of the world's major health issues. Malaria cases globally reached 219 million in 2017, with 435,000 cases attributed to malaria. The symptoms of malaria vary depending on where it is prevalent, and its prevalence varies annually. Malaria cases are influenced by three factors: the host (humans and mosquitos), the agent (parasites), and the environment. It is commonly acknowledged that the characteristics of rain impact mosquito growth and reproduction as well as the habitats of mosquitos.

According to the malaria situation in Indonesia, 10.7 million individuals continue to live in areas with a moderate to severe endemicity of the disease. These regions mainly consist of Papua, West Papua, and NTT. In 2017, a total of 514 districts/cities in Indonesia, 266 (52%) were malaria-free areas, 172 districts/cities (33%) are low endemic, 37 districts/cities (7%) are medium endemic, and 39 districts/cities (8%) have high endemic prevalence (Ministry of Health, 2018).

Sarmi Regency is one of the regencies in Papua Province. According to the Sarmi District Health Profile in 2017, 31,068 cases of malaria patients were found to be positive after microscopic analysis. Sarmi Regency cases of pregnant women infected with Malaria in 2010 were 260 people (1.5%) with a total population of 41,515 residents. The high incidence and prevalence of malaria indicate inadequate or ineffective attempts to eradicate the disease. (Anggraeni.*et al*, 2012).

Malaria is often considered a common disease in endemic areas. People have different perspectives on how to treat malaria; some opt to rely on the nation's established medical facilities, such as public health center (Puskesmas), hospitals (RS), and professional doctors, while others choose to self-medicate themselves by purchasing antimalarial medications from stores or pharmacies. The decision to utilize antimalarial medications purchased in stores or pharmacies is generally influenced by information obtained from friends or family who have experienced malaria. When antimalarial medications are being used inappropriately, several substantial effects might occur, including the decreased efficacy of some antimalarial treatments and resistance to chloroquine. This is one of the most difficult issues in attempting to treat malaria (Cotesea *et al.*, 2013). Previously, a descriptive study was conducted on the behavior of people seeking malaria treatment in general in Sarmi City, but no research has been conducted in Sarmi Regency, especially regarding the behavior of people seeking malaria treatment during pregnancy. The results of the study were in the form of knowing the various behaviors of people

seeking malaria treatment in Sarmi City, including seeking traditional medicine, public health centers, buying drugs at drugstores or pharmacies, and also doing nothing. This behavior is influenced by the community's supportive factors, such as their own initiative and family support, while the inhibiting factors include the distance to the health service, which is relatively far, the high cost of treatment incurred, and the lack of existing health facilities (Cotesea *et al*., 2013).

In addition, it is frequently difficult to see the clinical symptoms of malaria that pregnant women are experiencing in endemic areas. It leads pregnant women to consider that taking self-medication is sufficient because they perceive their clinical symptoms as somehow being normal. This self-medication behavior may lead to a decrease in efficacy or even cause drug resistance.

Therefore, this study was conducted with the aim of finding out whether knowledge and attitudes can directly influence people's behavior to seek treatment for malaria in pregnancy, especially for people in Sarmi Regency.

RESEARCH METHODOLOGY

This study uses a correlational analytic method with a *cross-sectional* (cross-border) approach, which means the study has done by measuring the independent and dependent variables at the same time as the measurement. This means that this study was conducted with only one observation and measurement simultaneously between data on knowledge and attitudes towards seeking treatment for malaria in pregnancy. The population in this study were all pregnant women who visited the Puskesmas Samanente, Sarmi Regency from January to March 2022 as many 30 people, this research used sampling technique *Total Sampling* with sampling 30 people. Inclusion criteria on this research is Willing to be a respondent, Mothers who are pregnant and currently or have suffered from malaria, Can read and write. Criteria exclusions in this study are Pregnant women who are sick at the time of the study, Pregnant women with Auto Immune, Pregnant women with pregnancy complications

RESEARCH RESULT

Knowledge of Pregnant Women About Malaria

The results of univariate analysis on each variable by producing a frequency distribution of the knowledge levels of the respondents. The distribution data prevalence from the respondents' knowledge levels can be seen in Table 1 below:

Table 1
Level of knowledge about malaria among pregnant women at the Samanente Health Center in 2022

Knowledge level	N	%
Moderate	16	53.3
Good	14	46.7

Based on Table 1, it was found that the distribution of the most respondents with a moderate level of knowledge is higher (53.3%) compared to respondents with a good level of knowledge (46.7%) which means that not all pregnant women are fully understand about malaria, malaria mosquitoes, and the medications.

Attitudes of Pregnant Women Toward Malaria

The distribution prevalence statistics from respondents' attitude levels are shown in the table below.:

Table 2
The attitude levels of pregnant women regarding the attempts in seeking treatment during pregnancy 2022

Attitude Level	N	%
Moderate	12	40.0
Good	18	60.0

Based on Table 2, It was discovered that respondents with a good attitude had a higher distribution percentage level (60%) than those with a moderate level (40%), indicating that practically all pregnant women had a positive attitude toward obtaining treatment for malaria during pregnancy.

Behavior of pregnant women to seek the medication for malaria during pregnancy

The following table contains information on the data distribution of pregnant women's decisions to seek medical treatment for malaria during their pregnancies:

Table 3
Behavior of pregnant women to seek malaria treatment in pregnancy 2022

Behavior of pregnant women to seek the medication for malaria during pregnancy	N	%
Yes	11	36.7
No	19	63.3

Based on Table 3, In comparison to

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respondents who had the habit of seeking treatment for malaria during pregnancy, it was shown that 63.3 % of respondents did refrain from doing so. This indicates that there are still pregnant women who have the tendency of getting medical help for malaria while pregnant.

The relationship between knowledge level and behavior of pregnant women to seek treatment for malaria in pregnancy

Bivariate analysis was carried out using the *chi-square* test to see the relationship between the knowledge level and behavior of pregnant women in seeking medical treatments for malaria during pregnancy in the community of pregnant women at the Samanente Health Center, the analysis results are shown in Table 4 below:

Table 4
Relationship between knowledge of malaria and behavior of pregnant women to seek malaria treatment in pregnancy

Knowledge of pregnant woman abaout Malaria	Mother's Behavior Pregnant Looking Treatment Malaria		Total	*P*	OR	CI
	Yes	Not				
Moderate	7 (43.8%)	9 (56.3%)	16 (100%)	0.3	1.9	0.4 – 8.9
Good	4 (28.6%)	10 (71.4%)	14 (100%)			

Based on Table 4, it was found that respondents with moderate knowledge who did not have the habit of seeking malaria treatment in pregnancy were 56.3% and the group of respondents with good knowledge who did not have the habit of seeking malaria treatment in pregnancy was 71.4%. This indicates that having a greater degree of information can improve the proportion of behavior for not seeking malaria treatment during pregnancy, which is 15.1%. Although there are differences in proportions, the results of the analysis show the value (*P*>0.05) which means that there is no relationship between the level of knowledge and behavior of pregnant women to seek treatment for malaria in pregnancy. The behavior of pregnant women to seek malaria treatment throughout their pregnancy can also be influenced by their education level, with the average education level in high school for as many as 23 people (76.7%).

The relationship between attitudes and behavior of pregnant women to seek treatment for malaria in pregnancy

The result of bivariate analysis to determine the relationship between attitudes and behavior of pregnant women to seek treatment for malaria during pregnancy at the Samanente Health Center. can be seen in Table 5 below :

Table 5
The relationship between attitudes and mother's behavior pregnant seeking treatment in for malaria pregnancy

Attitude mother pregnant about malaria	Behavior of pregnant woman look for malaria treatment		Total	*P*	OR	CI
	Yes	Not				
Moderate	7 (58.3%)	5 (41.7%)	12 (100%)	0.04	4.9	0.9 – 24.2
Good	4 (22.2%)	14 (77.8%)	18 (100%)			

Based on Table 5, shows that the respondents with good attitude category did not have the habit of seeking malaria treatment in pregnancy were higher (77.8%) than the respondents with moderate category (41.7%). Despite the relatively huge difference, the analysis results suggest that the

value of (P 0.05) indicates that there is a relationship between pregnant women's attitudes and behavior in seeking malaria treatment during pregnancy.

DISCUSSION

Knowledge of pregnant women about malaria at the Samanente Health Center

Based on the results of research on knowledge of pregnant women about malaria at the Samanente Health Center, it was found that the distribution with a moderate level of knowledge is higher (53.3%) compared to respondents with a good level of knowledge (46.7%) which means that not all pregnant women are fully understand about malaria, malaria mosquitoes, and the medications.

Knowledge is the outcome of human sensing, or even the result of someone having knowledge of substances through their senses (eyes, nose and ears). The level of attention and object perception at the moment of sensing to develop knowledge has a significant impact on it on its own. The sense of hearing, represented by the ear, and the sense of seeing, represented by the eye, constitute the majority of a person's knowledge (Notoatmodjo, 2012). It is important enhance to pregnant women's knowledge about malaria in order to change the mindset of people in Indonesia, especially in Papua which is still considered a common disease.

According to the theory of knowledge, knowledge is directly tied to education level, with higher education contributing to more in-depth comprehension. However, it should be emphasized that one's knowledge is not only obtained through formal education but can also be acquired from non-formal education (Darmawan, 2014).

The high percentage of moderate knowledge of pregnant women at the Samanente Health Center can be caused by several factors, such as influenced by their education level, which as many as 23 people only have senior high school as their highest level of education for pregnant women. (76.7%) and the lack of socialization to the local community, especially pregnant women about malaria and the high level of education in pregnant women, and the possibility of developing malaria during pregnant, which might harm the fetus' health.

Attitudes of pregnant women about malaria at the Samanente Health Center

Based on the results of the study above, it was found that the distribution of the most respondents with a good attitude is higher (60%) compared to respondents with a moderate attitude (40%) which means that almost all pregnant women show a positive attitude about seeking malaria treatment in pregnancy.

Based on demographics, it takes ± 4 hours to travel from the center of Sarmi Regency to reach the Samanente Health Center by using two-wheeled (motorcycle) or four-wheeled vehicles. Meanwhile, based on the results of the study, the average distance from the health center for pregnant women is < 30 minutes far. The proximity of the public health center to one's residence will certainly make it easier for someone to access it without experiencing physical exhaustion. The ability to access a public health center also makes a person feel safer and more comfortable, thus increasing people's interest in using it.

According to (Notoatmodjo, 2012), suggests that attitudes can be positioned as a result of an evaluation of the attitude object which is expressed in cognitive, affective (emotional) and behavioral processes. The attitude in this study refers to the attitude of pregnant women toward malaria. Attitude has a big role in determining a positive or negative attitude that will be carried out by someone.

The level of good attitude of pregnant women about malaria at the Samanente Health Center was higher due to several factors, including the average pregnant woman did not work/IRT as many as 30 people (100%), consequently they know the necessity to visit a doctor at the nearest health center.

Behavior of pregnant women to seek treatment for malaria in pregnancy at the Samanente Health Center

Behavior is defined as an activity or activity of the organism (living thing) in question. Therefore, all living things—including plants, animals, and humans—behave from a biological perspective because they have their own activities. (Notoatmodjo, 2012).

Based on the basic theory of Lawrence Green, it is stated that a person's behavior toward health issue is influenced by three factors, spesifically: predisposing factors (age, occupation, education, knowledge and attitudes), enabling factors (distance to health facilities), reinforcing factors (family support and community leaders) (Notoatmodjo, 2014).

Based on the results of research on the behavior of pregnant women to seek malaria treatment, it was found that the distribution of respondents did not seek malaria treatment in pregnancy was higher (63.3%) compared to respondents who had the habit of seeking malaria treatment in pregnancy. This shows that there are

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still pregnant women who have the tendency of seeking malaria treatment during pregnancy.

The behavior of pregnant women to seek malaria treatment is higher than respondents who did not seek malaria treatment in pregnancy due to several factors, one of which is malaria is becasse it is still considered a common disease, so that pregnant women are more likely to ignore malaria, especially during their pregnancy.

The relationship between knowledge of pregnant women and behavior to seek treatment for malaria in pregnancy at the Samanente Health Center

The results of the Chi Square test analysis showed that it was not significant, which implies that there was no relationship between knowledge of malaria and the behavior of pregnant women to seek treatment for malaria in pregnancy (P > 0.05).

The results of this study are in line with the research of Septiany, R (2019) regarding the relationship between knowledge and attitudes about malaria with the behavior of pregnant women to seek treatment for malaria in pregnancy in Sorong Regency. However, an improvememnt in knowledge about malaria in pregnant women can enhance their behavior in seeking malaria treatment in pregnancy.

There is no relationship between knowledge of malaria and the behavior of pregnant women to seek malaria treatment in pregnancy because the study area is a malaria endemic area so that pregnant women have experience which later becomes their knowledge about malaria. It can also be caused by the beliefs and customs of the local community that affect the knowledge of pregnant women about malaria based on family beliefs and customs.

The Papuan ethnic community is still very much bound to their cultures that have existed since their ancestors, including their obedience to their leaders in this case the tribal chiefs/traditional elders. Because of that, all living activities including prohibitions, existing rules are all carried out in accordance with the instructions of the traditional leader which if not obeyed according to their beliefs will result in disaster and even death (Ester, 2013).

The relationship between the attitude of pregnant women with the behavior to seek treatment for malaria in pregnancy at the Samanente Health Center

There was a relationship between the attitude of pregnant women about malaria with the behavior of pregnant women to seek treatment for malaria in pregnancy (P < 0.05).

A good attitude but not having the habit of seeking more malaria treatment in pregnancy can be due to the average distance from which pregnant women live from the puskesmas is < 30 minutes and the average pregnant woman does not work / IRT so that it is possible for pregnant women not to have a vehicle to go to the health center.

However, the results of this study are not in line with the research of Septiany, R (2019) regarding the relationship between knowledge and attitudes about malaria with the behavior of pregnant women to seek treatment for malaria in pregnancy in Sorong Regency. (P>0.05). However, most of the respondents admitted that they did not have the habit of seeking malaria treatment in pregnancy.

There is a relationship between the attitude of pregnant women about malaria with the behavior of pregnant women to seek treatment for malaria in pregnancy caused by several factors, one of which is that people understand better that when they get symptoms of malaria, they must immediately go to the doctor.

CONCLUSION

Concluded from research level of knowledge of pregnant women about malaria is higher than the level of good knowledge. And attitude of pregnant women towards malaria is higher than that of pregnant women with a moderate level of attitude, which means that almost all pregnant women show a good attitude about seeking malaria treatment in pregnancy, distribution of respondents who did not seek malaria treatment during pregnancy was higher than the percentage of respondents who had the habit of seeking malaria treatment during pregnancy. There are 2 conclusions there was no relationship between knowledge level and behavior of pregnant women in seeking malaria treatment and there is a relationship between the attitudes of pregnant women about malaria and the behavior of pregnant women in seeking malaria treatment

SUGGESTION

Recommends pregnant women to routinely make pregnancy visits at the Puskesmas in order to increase knowledge and attitudes about malaria with behavior seeking malaria treatment in pregnancy. WHO Recommendations on Antenatal Care in the 1st trimester at least 1x visit, 2nd trimester 1x visit, 3rd trimester 2x visits at 30-32 weeks and 36-38 weeks and indonesia have standard operating procedur antenatal care wich Health workers establish a diagnosis and prepare a medical service plan by carrying out supporting examinations in the

form of routine blood, complete blood, blood type, rapid tests for hepatitis B, HIV and malaria.

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