Relationship of Pregnant Women's Knowledge with Nutritional Intake

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Abstract: Knowledge of nutritional intake in pregnant women is knowledge of the relationship between food consumption during pregnancy and maternal health. Good knowledge of pregnant women is expected to choose the intake of foods that contain nutrients that can meet their bodies so that they are good nutrition for pregnant women and fetuses. This study aims to find out the relationship of pregnant women's knowledge with nutritional intake in Johan Pahlawan District of West Aceh Regency. This research method is quantitative research with a crossectional design. The population of this study is pregnant women trisemester I to trisemester III in Johan Pahlawan District of West Aceh Regency as many as 62 people with total sampling technique, so the sample will be studied as many as 62 people. The results of the study can be known that of 23 pregnant women who are well knowledgeable only 1 person who intakes nutrients is not enough, while from 39 pregnant women who are less knowledgeable only 8 people who have enough nutritional intake, showed that there is a strong relationship between the knowledge of pregnant women with adequate nutritional intake (P-value = 0.002 and OR = 71,182). The conclusion of this study the better the knowledge of pregnant women the more meets the adequacy of nutrient intake.

Keywords: Knowledge, Nutritional Intake, Pregnant Women.

Introduction: One of the indicators of people's nutritional status is through the nutritional status of pregnant women. If the nutritional intake of pregnant women from food is not balanced with the needs of the body's Introduction Introduction, there will be a nutritional deficiency. Pregnancy can cause increased energy metabolism, then the occurrence of increased energy and other nutrients for the growth and development of the fetus, the increase and magnitude of the organs of the womb, as well as changes in the composition and metabolism of the mother's body. If a deficiency of certain nutrients needed during pregnancy can cause defects in the fetus (Samiatulmilah, 2018). Nutritional problems during pregnancy is one of the important factors that affect the development of the bucket and fetus and the health status of pregnant women. Pregnancy is a continuous stage, so nutritional deficiencies at a period will have a different impact on the gestation period (Azizah and andriani, 2017). Nutrition of pregnant women is a nutrient that is needed in large quantities for the fulfillment of the mother's own nutrition and the development of the fetus it contains. Food needs are seen not only in the portions eaten but must be determined on the quality of nutrients contained in the food consumed daily (Hidayat, 2016).

The maternal mortality rate (AKI) of 90% in developing countries in 2013 was 230 per 100,000 live births compared to 16 per 100,000 live births in developed countries. The

mother died from complications during pregnancy. More than 60,000 maternal deaths in 115 countries showed pregnant women after having a history of poor health (such as Anemia, diabetes mellitus, malaria,*HIV,*obesity) so it has to do with nutritional intake*(World Health Organization,*2014). Bleeding, hypertension in pregnancy and infection are the three leading causes of maternal death in Indonesia based on the Ministry of Health 2018 report. The cause of death is closely related to nutritional intake such as bleeding is one of the consequences of iron deficiency which is a nutrient needed every day in the nutritional intake of pregnant women, and eclampsia caused by hypertension also has to do with nutrients in nutritional intake during pregnancy (Almatsier, 2010). Knowledge of nutritional intake in pregnant women who are less, has a greater risk of suffering from anemia in pregnancy compared to well-informed pregnant women (Maryani and Lestari, 2015).

The results of basic health research of the Indonesian Ministry of Health's puslitbang agency in 2013 the prevalence of anemia in the pregnant women population was 37.1%, while the results of basic health research of the indonesian ministry of health in 2018 the prevalence of anemia in the pregnant women population increased, namely by 48.9%, cases of anemia of pregnant women in Aceh province in 2018 by 46% (Dinkes aceh province, 2018), while the case of anemia in pregnant women in West Aceh Regency in 2019 was 1,061 people out of 3,469 pregnant women who were examined for Hb (30.67%), of 4,758 people total coverage of pregnant women, Puskesmas Johan Pahlawan pregnant women with anemia 361 people (36.54%), out of 988 pregnant women examined, Puskesmas Suak Ribee pregnant women with anemia amounted to 229 people (70.68%), From this case of anemia is closely related to nutritional intake (West Aceh Dinkes, 2019).

The initial study conducted by researchers with interviews of 10 pregnant women in West Aceh Regency about the food consumed where only 4 pregnant women were fulfilled with animal protein, where ideally pregnant women should consume foods that contain sufficient protein and balanced nutrition and should be twice or one serving more than the amount of food consumed by women before becoming pregnant (Almatsier, 2010; Kemenkes RI, 2016). Previous research has been conducted by SamiatulMilah (2018), about the picture of pregnant women's knowledge about nutritional intake in Pawindan Village ciamis district ciamis district. The novelty of this study is the type of research, sample coverage and different areas, can be seen with the formulation of the problem of how the relationship of knowledge of pregnant women with nutritional intake in Johan Pahlawan district of West Aceh Regency.

Methods

Quantitative research with *cross sectional* design was conducted in the working area of Johan Pahlawan Health Center and Suak ribee Health Center, Johan Pahlawan District of West Aceh Regency in April to June 2020. The population of all pregnant women from trimester 1 to trimester III as many as 165 pregnant women in Johan Pahlawan Health Center and Suak Ribee Health Center of West Aceh Regency in 2020. The criteria for inclusion of samples in this study are all pregnant women in the first to third trimester who are willing to be respondents, do not have diseases either chronic or acute, including tuberculosis, heart abnormalities, and diabetes mellitus (DM). The size of the sample is calculated based on the

formula Slovin obtained a sample of 62 pregnant women in the first trimester to the third trimester.

Sampling is done by *purposive sampling* technique that is sampling based on special criteria, this study consists of two variables, free variables namely knowledge and bound variables, namely nutrient intake (Carbohydrates, Proteins, Fats, and Vitamins) in pregnant women. The data collected in this study consists of primary data obtained directly through interviews using questionnaires and *food frequency forms.* Secondary data includes the number of pregnant women from all village midwives in the working area of Johan Pahlawan Health Center and Suak Ribee Health Center. The data that has been collected is then analyzed using the Correlation and Regression Logistics test.

Result

1. Bivariate Analysis of Knowledge with Nutritional Intake of Pregnant Women.

The results of observations of the frequency distribution of good and poor maternal knowledge with good and poor nutritional intake. Based on Table 1 shows that the proportion of respondents who know good knowledge with good nutrition intake is 95.7% greater than respondents whose knowledge is less good with good nutrition intake which is 20.5% while the proportion of respondents who know less well with poor nutrition intake is 79.5% greater than the respondents of good knowledge with poor nutrition intake which is 4.3%.

PR value = 19.75 which means respondents whose knowledge is not good 19 times more likely to intake of nutrients is less good compared to respondents who are good knowledge and knowledge is a risk factor of poor nutritional intake, from the results of statistical tests with a 95% confidence level also showed that there is a significant association between knowledge levels and nutritional intake in pregnant women with a value of P value = 0.001.

Table 1. Knowledge Relationship with Nutritional Intake of Pregnant Wome

Mother's Knowledge	**Nutritional Intake of Pregnant Women**		**Total (%)**	**PR** *p-value*
	Good (%)	**Less good (%)**		
Less Good	8 (20,5)	31 (79,5)	39 (100)	
Good	22 (95.7)	1 (4,3)	23 (100)	(19,75- 0.001)
Total	30 (100)	32 (100)	62 (100)	

2. Multivariate Analysis

From multivariate analysis using logistic regression tests the most dominant factor is maternal knowledge with a value of P-value 0.002 which means a significant relationship of maternal knowledge with nutritional intake in pregnant women with a value of PR = 71,182 which means maternal knowledge 71 times greater affect nutritional intake in pregnant women in Johan Pahlawan District of West Aceh Regency compared to other variables.

Table 2. Logistic Regression of Dominant Factors with Nutritional Intake in Pregnant Women

Variable	P-value	Prevalence Ratio	confidence interval
Socioeconomic	0,023	0,59	0,005-0,682
Mother's knowledge	0,002	71,182	5,067-999,990
Mother's Education	0,019	9,038	1,438-56,797

Discussion

1. Bivariate Analysis of Knowledge with Nutritional Intake of Pregnant Women

This study in accordance with the results of fatimah *et al.*,(2020) suggests that there is a relationship of food knowledge and practice associated with anemia in pregnant women in Kuala Terengganu Malaysia. The results of this study are also in accordance with the results of research conducted by Maryani (2015) suggested that there is a significant relationship between knowledge and anemia of pregnant women. Knowledge is one of the factors that stimulate the realization of a health behavior (Yessi *et al*,2017). If pregnant women know and understand nutritional intake and how to prevent anemia, they will have good health behaviors in the hope that they will avoid the risk of anemia in pregnancy (Ika *et al*, 2018).

If a person's education is higher, it will be easy to accept new things and easily adjust to new changes. Experience is very influential on a person's level of knowledge, if higher education then experience more and more. Lack of knowledge of pregnant women about nutritional intake (fulfillment of nutritional needs) during pregnancy, one of which can result in iron deficiency (Puspitaningrum and Fratika, 2014). In accordance with the standards of obstetric practice pregnant women are given iron tablets for at least 90 consecutive days, and given nutritional counseling every antenatal care visit about the importance of taking iron tablets, foods that contain iron and rich in vitamin C, drink milk and foods that contain nutritional sources of carbohydrates, proteins, fats and other vitamins (Indah *et al*, 2016).

Lack of nutrient intake during pregnancy one of which can cause anemia so that it is dangerous for the mother and fetus. Anemia in pregnant women can cause the risk of post partum bleeding. If anemia occurs early in pregnancy, premature labor can occur (Fanny *et al*,2012). Anemia in pregnancy that is often found is iron nutritional anemia. Iron nutritional anemia often occurs due to lack of intake of nutrients containing iron so that it adversely affects the fetus, therefore pregnant women must have knowledge of the intake of nutrients needed for the body and want to consume foods high iron sources both from animal protein and vegetable protein and other sources of nutrients such as vitamins, carbohydrates and fats so that nutrient intake during pregnancy is met (Hidayah and Anasari, 2012).

Based on the results of the study, the factors that affect nutritional intake in pregnant women are basic factors, direct, and indirect factors (Asrina *et al*, 2014). Basic factors include knowledge, education, and socio-culture. The level of knowledge of the mother influences her behavior. The higher the knowledge, the higher the awareness to prevent anemia. The

level of knowledge of pregnant women will also affect the intake of nutrients that have an impact on eating habits that can ultimately avoid the occurrence of anemia. The level of knowledge of pregnant women can be obtained from formal, informal and non-formal education so that it can affect the mother's knowledge of nutritional intake during pregnancy (Suwarni, 2013).

According to the assumption of researchers why there is a relationship of maternal knowledge with the nutritional intake of pregnant women because of low knowledge informally or formally causes mothers to understand less the relationship of nutrient intake with the risks that occur during pregnancy, lack access to information and handling, less able to choose food ingredients and consume foods that contain nutrients in sufficient and diverse amounts in pregnant women.

Conclusion

There is a fairly close relationship between the mother's knowledge and the intake of nutrients during pregnancy, which means that the better the mother's knowledge, the better the intake of nutrients during the pregnancy.

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