FACTORS AFFECTING KNOWLEDGE OF PREGNANT WOMEN ABOUT NUTRITION DURING PREGNANCY IN PORTIBI SUB DISTRICT 2012

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ABSTRACT

Malnutrition in pregnant women can cause risks and complications in the mother. Many pregnant women, especially in early pregnancy, not yet aware that pregnancy causes an increase in energy metabolism. In Indonesia (SUSENAS and UNICEF Survey) reported that of the approximately 4 million pregnant women, half of whom suffered anemia and a million other chronic energy deficiency. This study aims to determine the factors that affect the mother's knowledge about nutrition during pregnancy in the district Portibi 2012.

This type of research is descriptive correlative with cross sectional approach. The population of pregnant women in Portibi sub district as many as 205 people. Samples taken as many as 51 people. Techniques using simple random sampling. The study was conducted in March until July 2012.

The results obtained at most pregnant women are less knowledgeable of 28 people (54.90%), most aged 20-35 years is 34 people (66.67%), most have 2-4 parity as much as 29 people (56.87 %), the most widely by the third trimester of pregnancy in which 23 people (45.10%), at most get information about nutrition during pregnancy from the environment (friends, family, parents) that 22 people (43.14%). Chi-square test results showed no significant correlation between maternal age (X2count = 1.6975) parity (X2count = 0.9937), gestational age (X2count= 0.1888), resources (X2count = 1.422) with mother's knowledge about nutrition during pregnancy.

Expected to health workers, especially in Portibi sub district to be more active in holding counseling on nutrition during pregnancy so that she can increase the level of knowledge.

Keywords: Factors That Influence, Knowledge, Nutrition of Pregnant Women
References   : 27 (2002-2011)

I. BACKGROUND

World Health Organization (WHO) (2005) reports that there were 52 % of pregnant women suffer from anemia in developing countries. In Indonesia (SUSENAS and UNICEF Survey) reported that of the approximately 4 million pregnant women, half of whom suffered anemia and a million other were chronic energy deficiency (Samhadi, 2007). Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) is one of the indicators to assess the success of health services in a country. MMR in North Sumatra in 2008 was 290 / 100,000 live births, the rate is still high when compared with the national MMR were 228/ 100,000 live births. MMR is already experiencing a decline compared to 2006 was 315 / 100,000 live births (North Sumatra Health Profile , 2008) .

A total of 40.7 % of women aged 15-49 years consume energy below the minimum requirement and as much as 37.1 % for protein consumption below minimum requirements. In North Sumatra , the figures were respectively show the 43,1 % and 22.3 % (Riskesdas (Basic Health Research) , 2010).

The contribution of carbohydrate consumption of Indonesian society towards energy consumption is 61 % , slightly above the recommended figure of General Guidelines for Balanced Nutrition. While the contribution of protein to energy consumption is only 13.3 %, and the contribution of fat to energy by 25.6 % (Riskesdas, 2010).

Studies in Maros, North Sulawesi who studied the diet and hemoglobin levels in pregnant women showed a decrease in the number of pregnant women who have severe anemia

from the first trimester (1.6 % to 0 % in the second trimester).

Pregnant women suffering from anemia was increased in the second trimester of 8.6 % which is the first trimester was 12.5% to 21.1 % in the second trimester, and decreased in the third trimester to be 15.4 %. Similarly with mild anemia from 18.8 % in the first trimester increased to 24.4 % in the second trimester, and decreased in the third trimester to be 21.1 % (Fatima , 2011) .

Based on research conducted to Simanjuntak (2009) in Rantauprapat (North Sumatra) of 86 pregnant women who are anemic obtained 77.9% aged 20-35 years and 64.47% had a history of one or more parity than4.

Wahyudi et al. (2009) in his research in Kulon Progo, Yogyakarta claimed nutritional status is influenced by the amount and type of food consumed, the individual household income and mother's knowledge of health and nutrition.

From the initial survey conducted by the author in the Portibi Julu sub district on 24-25 March 2012 found that from 10 pregnant women, there are only two people who know about the increased nutritional needs of the mother during pregnancy and no one knows clearly how much balanced nutrition it needs.

II. RESEARCH METHODS

Design of this research is correlative with the aim to identify factors of maternal age, parity, gestational age and resources to influence mother knowledge about the mother's nutrition during pregnancy in the Portibi sub district 2012.

This research was conducted in the Portibi sub district on March-July in 2012. Population and sample of this research is all pregnant women in Portibi sub district as many as 205 people while the sample is 25% of the population of as many as 51 peoples with simple random sampling technique. Data were collected through questionnaires and analyzed using univariate and bivariate.

III . RESULTS AND DISCUSSION

UNIVARIATE ANALYSIS

Univariate analysis based on maternal age, parity, gestational age, maternal source of

information and knowledge about nutrition during pregnancy is described as follows :

1. Knowledge

Chart 1
Distribution of Respondents Knowledge About Nutrition During Pregnancy in Portibi sub district in 2012

From the above chart it can be seen that the respondents' knowledge about nutrition during pregnancy majority with less knowledge as much as 28 respondents (54.90 %) and a good knowledge of minority respondents as many as 23 respondents (45.10 %).
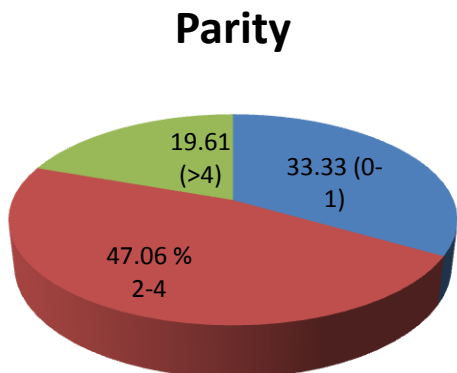
2. Mother Age

Chart 2
Age distribution of Respondents in Portibi SubDistrict in 2012
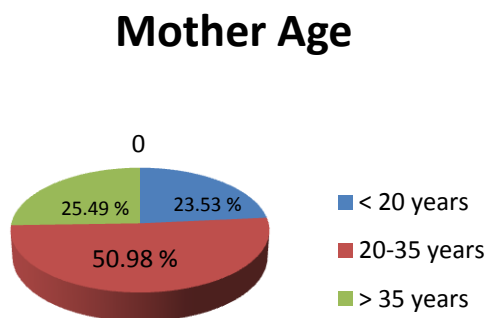
Based on the above chart can be seen that majority of pregnant women aged 20-35 years were as many as 26 people (50.98 %) and the least was < 20 years as many as 12 people (23.53 %) .
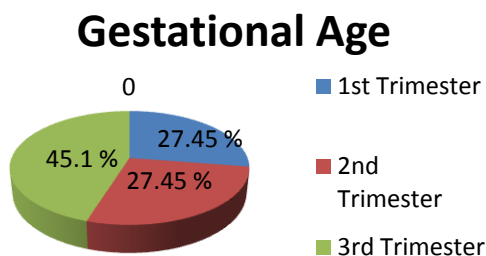
3. Parity

Chart 3
Parity distribution of Respondents Portibi in Portibi Sub District in 2012

Parity

Based on the above chart can be seen the majority of respondents parity is 2-4 as many as 24 people (47.06 %) and most minorities are > 4 as many as 10 people (19.61 %) .
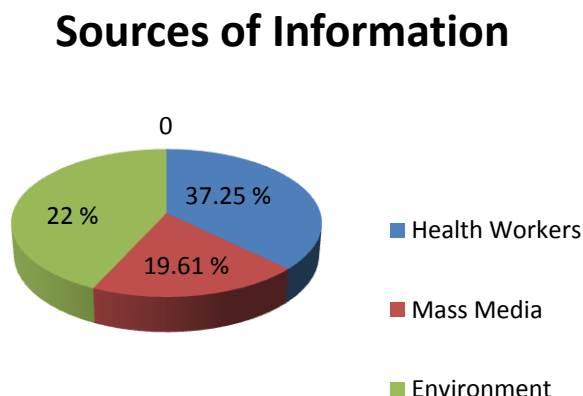
4. Gestational Age

Chart 4
Gestational Age Distribution of Respondents in Portibi Sub 2012

Gestational Age

Based on the above chart can be seen in the majority of the gestational age of the respondents was the third trimester as many as 23 people (45.10 %), while for the first trimester and second trimester have the same amount of respectively 14 people (27.45 %) .

5. Sources of Information

Chart 5
Sources of Information of Respondents in Portibi Sub District in 2012

Sources of Information

Based on the above chart can be seen in the majority of resources for environmental respondents came from as many as 22 people (43.14 %) and the minority comes from the mass media as many as 10 people (19.61 %) .

BIVARIATE ANALYSIS
Bivariate analysis to determine the influence of knowledge, maternal age,parity, gestational age and maternal resources about nutrition during pregnancy is described as follows :

1. Knowledge Respondents according to Mother Age

Based on the research conducted, the distribution of respondents' knowledge about nutrition during pregnancy by maternal age can be seen in the chart below:

Table 1
Distribution Of Respondents Knowledge About Nutrition During Pregnancy According to Mother Age In Portibi Sub District in 2012

No	Parity	Knowledge				Total		X2	X2
		Good		Less					
		F	%	F	%	F	%	Count	Table
1	0-1	6	35,29	11	64,71	17	33,33		
2	2-4	12	50	12	50	24	47,06	0,994	5,991
3	>4	5	50	5	50	10	19,61		
	Total	23	45,10	28	54,90	51	100		

From above table can be seen that from 12 respondents were aged < 20 years the majority have less knowledge of 8 people (66.67 %), of the 26 respondents were aged 20-35 years the majority of knowledgeable well as 14 people (53.85 %), from 13 respondents were aged > 35 years the majority of no less knowledgeable of 8 people (61.54 %) .

Chi - square test results stating Ho is rejected if the X2 count > of X2 table , which means no significant effect . Instead Ho accepted if X2 count < than X2 table , which means there is no significant influence . Results of analysis with chi-square test with df = 2 , X2 count (1.697) < from X2 table (5.991), then Ho is accepted, it means that there is no significant relationship between age and the mother's knowledge about nutrition during pregnancy.

2. Respondents Knowledge According to Parity

Based on the research conducted, the distribution of respondents' knowledge about nutrition during pregnancy is based on parity can be seen in the table below:

Table 2
Distribution of Respondents Knowledge About Nutrition During Pregnancy Based on Parity in Portibi Sub District in 2012

No	Mother Age	Knowledge						Total		X2 Count	X2 Table
		Good		Less							
		F	%	F	%	F	%				
1	<20	4	33,33	8	66,67	12	23,53				
2	20-35	14	53,85	12	46,15	26	50,98			1,697	5,991
3	>35	5	38,46	8	61,54	13	25,49				
	Total	23	45,10	28	54,90	51	100				

Based on the above table it is known that out of 17 respondents who have a 0-1 parity majority knowledgeable about 11 people (64.71%), of the 24 respondents who have parity 2-4 and 10 respondents who have parity> 4 each 12 people (50%) and 5 (50%) were either knowledgeable or less.

Chi-square test results stating Ho is rejected if the X2 count > of X2 table, which means no significant effect. Instead Ho accepted if X2 count < than X2 table, which means there is no significant influence. Results of analysis with chi-square test with df = 2, X2 count (0.994) < from X2 table (5.991), then Ho is accepted, it means that there is no significant influence between the number of parity which is owned by the mother's knowledge about nutrition during pregnancy.

3. Respondents Knowledge According to Gestational Age

Based on the research conducted , the distribution of respondents' knowledge about nutrition during pregnancy is based on gestational age can be seen in the table below:

Table 3
Distribution of Respondents Knowledge About Nutrition During Pregnancy Based on Gestational Age in Portibi Sub District 2012

No	Gestational Age	Knowledge						Total		X2 Count	X2 Table
		Good		Less							
		F	%	F	%	F	%				
1	1st Trimester	6	42,86	8	57,14	14	27,45				
2	2nd Trimester	7	50	7	50	14	27,45			0,189	5,991
3	3rd Trimester	10	43,48	13	56,52	23	45,10				
	Total	23	45,10	28	54,90	51	100				

Based on the above table it is known that from the 14 respondents in the first trimester of pregnancy were less knowledgeable, majority there are 8 people (57.14 %) , of the 14 respondents who are in the second trimester of pregnancy there are 7 people (50 %) were knowledgeable good, and of 23 respondents with the majority of the third trimester of pregnancy there were 13 people are less knowledgeable (56.52 %).

Chi-square test results stating Ho is rejected if the X2 count > of X2 table , which means no significant effect. Instead Ho accepted if X2 count < than X2 table , which means there is no significant influence. Results of analysis with chi-square test with df = 2 , X2 count (0.189) < from X2 table (5.991), then Ho is accepted, it means that there is no significant relationship between gestational age at maternal knowledge about nutrition during pregnancy .

4. Respondents Knowledge According to Information Sources

Based on the research conducted, the distribution of respondents' knowledge about nutrition during pregnancy based on information resources can be seen in the table below.

Table 4
Distribution of Respondents Knowledge About Nutrition During Pregnancy Based on Information Sources in Portibi Sub District 2012

No	Information Sources	Knowledge				Total		X2 Count	X2 Table
		Good		Less					
		F	%	F	%	F	%		
1	Health Workers	7	36,84	12	63,16	19	37,25	1,422	5,991
2	Mass Media	6	60	4	40	10	19,61		
3	Environment	10	45,45	12	54,55	22	43,14		
	Total	23	45,10	28	54,90	51	100		

Based on the above table it is known that from the 19 respondents who received information about pregnancy from a majority of health personnel knowledgeable about 12 people (37.25%), of the 10 respondents who use the mass media as the source of the majority infoermasi good knowledge there are 6 people (60%) , and of the 22 respondents who use the environment as a source of information less knowledgeable majority of 12 people (54.55%).

Chi-square test results stating Ho is rejected if the X2 count > of X2 table, which means no significant effect. Instead Ho accepted if X2 count < than X2 table, which means there is no significant influence. Results of analysis with chi-square test with df = 2, X2 count (1.422) < from X2 table (5.991), then Ho is accepted, it means that there is no significant relationship between resources with knowledge of mothers about nutrition during pregnancy.

DISCUSSION
1. Relationship between Respondents Knowledge About Nutrition During Pregnancy to Mother Age in Portibi Sub District in 2012
Based on the results, the mother at the age of 20-35 years a majority of well knowledgeable as many as 14 people (53.85%). Chi-square test results showed no significant difference between maternal age with knowledge of mothers about nutrition during pregnancy. This is indicated by X^2 count (1.697) < from X^2 .
Results of this study did not show any significant relationship between maternal age with knowledge of the mother can be caused by many other factors not examined include geographic factors, sample size, socio-economic circumstances and so forth.
This study is also in line with research by Syska Dwi (2010) in Singapore with titles

relationship between the characteristics of pregnant women with knowledge about pregnancy stating that the absence of a significant relationship between age and knowledge of pregnant women.

2. Relationship of Respondents Knowledge About Nutrition During Pregnancy to Parity in Portibi Sub District in 2012
Based on the results of research conducted mothers who have a good knowledge of the majority in the 2-4 parity as many as 12 people (50%), the same thing also happens to mothers with less knowledge. While minorities either good or less knowledgeable having parity > 4 are each as many as five people (50%). Results of analysis with chi-square test was not a significant difference between the number of maternal parity owned with knowledge about nutrition during pregnancy by X^2 count value (0.994) < from X^2.
Results of this study are not consistent with previous research by Rida Wahyuli Sirait (2011) in Medan, where the research results revealed a significant relationship between the number of parity with the knowledge of pregnant women.
According to the author assuming no significant effect between maternal parity possessed with knowledge about nutrition during pregnancy due to a different place of study, the number of samples, research time and other factors that are not known by researchers.

3. Relationship between Knowledge to Gestational Age During Pregnancy in Portibi Sub District in 2012
Each trimester in pregnancy have different nutritional needs. Based on the results of 51 respondents majority in the third trimester and at most have less knowledge of as many as 13 people (56.52%) and the minority in the first trimester with a good knowledge of as many as 6 people (42.86%).
Results of analysis with chi-square test df = 2 shows the value X^2 count (0.189) <from X^2 table (5.991) which means there is no effect of pregnancy on the mother's knowledge about nutrition during pregnancy.
Results of this study are not consistent with previous research by Maulina Mawaddah (2011) in the field that states the existence of a significant relationship between gestational age with a knowledge of pregnant women.

4.Relationship of Respondents Knowledge About Nutrition During Pregnancy to Information Sources in Portibi Sub District in 2012

Based on the results of 51 respondents the majority of resources took the information from environment as much as 22 people (43.14%) and the minority of the mass media as many as 10 people (19.61%). Results of analysis with chi-square test with df = 2, show the value X^2 count (1.422) < from X^2.

Results of this study are not consistent with previous research by Yulia Lilis Suryani (2003) in Yogyakarta, which stated that there was a significant relationship between resources with knowledge. According to the authors these differences could be due to many factors such as geographical conditions, sample size, study time, and other variables that are not included in this study.

According to the assumption of the authors of the above results show that knowledge about nutrition of pregnant women during pregnancy included in the poor category, and this is because the majority of women get information from the environment (family, friends, parents) where information is limited and less accurate when compared to information from health professionals or the mass media. Knowledge is linked to exposure to the mass media (television, radio, magazines) and interaction with the environment. Mother obtain information from various sources, and for resources in rural areas most frequently used are environment such as friends, family and people who believed as community leaders or religious leaders, health workers also.

CONCLUSIONS AND SUGGESTIONS

CONCLUSION

1. Knowledge of pregnant women most is less by 28 respondents (54.90%) and the results of chi-square test with df = 2, 95% confidence level, α = 0.05 showed no significant difference between maternal age (X^2 count (1.697) < X^2 table (5.991)), parity (X2 count (0.994) < X^2 table (5.991)), gestational age (X^2 count (0.189) < X^2 table (5.991)), resources (X^2 count (1.422) < X^2 table (5.991)) with knowledge of mothers about nutrition during pregnancy.

2. Based on the mother's age, most aged 20-35 years as many as 26 people (50.98%).
3. Based on parity, parity 2- 4 at most have as many as 24 people (47.06%) and there are those who have parity > 4 as many as 10 people (19.61%).
4. Based on gestational age, most in the third trimester as many as 23 people (45.10%).
5. Based on resources, most of the environmental gain as many as 22 people (43.14%)

SUGGESTION

1. For head of portibi and health centers in the Portibi sub district
   Especially expected to elements of society to health workers in the sub district of Portibi must improve further education and health promotion particularly about nutrition during pregnancy so that the knowledge of pregnant women are getting better at keeping her pregnancy.
2. For other researchers
   Similar research is needed further with larger samples and using other methods.

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