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Oral Presentation
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THE CORRELATION BETWEEN PREGNANT WOMEN'S LEVEL OF KNOWLEDGE AND THEIR BEHAVIOR OF CONSUMING FE TABLETS DURING PREGNANCY IN PUSKESMAS MELAYU KOTA PIRING IN 2019

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ABSTRACT

Pregnant women's knowledge on health, especially anemia, will be related to their behavior in the execution of anemia prevention program as knowledge holds a prominent role. Those with knowledge tend to be more compliant in meeting the needs of iron tablets and in consuming nutritional foods. The behavior of Fe consumption is measured by the amount of Fe tablets taken. This research seeks to know the correlation between pregnant women's knowledge and their behaviors of consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring, in 2019. This is an analytical research using cross-sectional approach, with knowledge as independent variable and behavior dependent variable. This research was conducted between 3 May to 12 May 2019 using 54 respondents as the sample. Accidental Sampling technique was utilized in the sample collection while to process the data, computerization with Chi-square test was employed. The research shows that 9 respondents (28,1%) possess low knowledge with good behavior while 7 (31,8%) possess high knowledge with poor behavior. The *Chi- square* shows the *p-value* of (0,008 < 0,05), so that Ho is rejected and Ha is accepted. It means that there is a relation between pregnant women's knowledge and their behavior of consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring in 2019. Hence, it is clear that people's knowledge influences their behavior. During pregnancy, pregnant women's high level of knowledge on Fe leads to good behavior and low level of knowledge leads to bad behavior of consuming Fe tablets.

Keywords: Knowledge, behavior of consuming Fe tablet

INTRODUCTION

Based on the survey of Indonesian Demographic and Health Survey 2015, the Maternal Mortality Ratio (MMR) in Indonesia was 305 per 100,000 live births. It means that within an hour Indonesia loses two mothers and eight babies due to several factors, some of which can be prevented. The data from Family Health Directorate shows that 40% of the death is caused by hemorrhage, and it is known that anemia is the risk factor of hemorrhage (Depkes, 2015).Based on the cases reported, Maternal Mortality Ratio in Riau Islands Province in 2018 was 120 per 100,000 live births. It was better than the year before, which was 127 per 100,000 live births. The death rate of mothers also decreased, from 54 in 2017 to 51 in 2018. The two biggest direct causes of maternal death in Riau Islands Province in 2018 were hemorrhage and hypertension during pregnancy. As for the indirect causes, they were malaria, HIV, pulmonary edema, kidney disease, gallstone, and other diseases that a mother

had. Nutritional anemia happens when the hemoglobin concentration is lower than the normal value of someone's age, sex, and weight because of lacking one or more essential nutritional foods for any reason. It is also commonly called iron deficiency. 1/5 people across the world, mainly in the developing countries, suffers nutritional anemia. In Indonesia, the prevalence of anemia is quite high, i.e. 28%-52% (16-40 years old) (Ratna 2012). Anemia during pregnancy is related to the increase of complications in pregnant women. The main cause of anemia during pregnancy is iron deficiency, making it frequently identified as iron-deficiency anemia. The World Health Organization (WHO) reported that the prevalence of iron deficiency in pregnant women is about 35-37%, and it increases along with the gestational age. One factor of the high rate of anemia during pregnancy is pregnant women's lack of knowledge about symptoms and impacts of anemia. Hence, even if they suffer from it, they do not feel that they are "sick" (Depkes RI, 2015). Some efforts conducted by Department of Health to reduce anemia rate in pregnant women are promotion of the importance of preventing anemia in pregnant women and distribution of Fe (iron) tablets. Anemia is mostly caused by iron deficiency; therefore, it is important to tell pregnant women the importance of consuming iron during pregnancy and after giving birth. Iron supplementation and the distribution of iron tablets are essential to prevent and reduce anemia, especially iron-deficiency anemia. There are correlations between Fe tablet consumption and anemia, particularly in the second trimester, third trimester, and the postpartum period. In fact, even though the pregnant women had received iron tablets, they did not take it regularly because they did not know the importance of the nutritional supplement for their pregnancy (Herlina, 2008). The side effect Fe tablets for pregnant women also hindered its regular consumption. In addition to knowledge, attitude toward Fe tablet consumption is also influenced by motivation. It can be in the form of support from the husbands or close people in the family. The other cause of the irregular consumption is the lack of monitoring. Pregnant women's knowledge on health, especially anemia, will be related to their behavior in the execution of anemia prevention program, as knowledge holds a prominent role. Those with knowledge tend to be more compliant in meeting the needs of iron tablets and in consuming nutritional foods.

The behavior of consuming Fe tablet can be measured by the correct amount of Fe tablet taken, the correct way to consume Fe tablet, and the timeliness and frequency of daily consumption. Iron supplementation and Fe tablet distribution are essential in preventing and reducing anemia, especially iron deficiency anemia. The impact of non-compliance in consuming Fe tablet during pregnancy is the increasing risk of complications (Helina, 2006).The women's need of nutritional foods is higher during pregnancy compared to the pre-pregnancy period and it will get even higher when they breastfeed their babies. The nutritional adequacy in pregnant women and the growth of the child they are carrying can be measured by the rise of their weight. The need of Fe in women are three times higher than in men. It is because, among others, women get periods every month, which

means they lose a lot of blood regularly (Depkes, 2008). According to Green in Notoatmodjo (2010), someone's health status is influenced by three factors. First, predisposing factor, which includes knowledge, attitude, faith, and perception; second, enabling factor, which includes the availability of and access to health facility; and third, reinforcing factor, which is defined as the attitude and behavior of health workers that fosters someone's particular behavior. Based on the survey conducted in September 2018, out of 10 pregnant women, 3 of them regularly consumed Fe tablets, while 7 of them did not consume it regularly because they were afraid of having too much blood and hypertension, and some of them consumed only few tablets. From the problems formulated above, this research will be entitled "The Correlation between Pregnant Women's Level of Knowledge and Their Behavior of Consuming Fe Tablets during Pregnancy". This research aims to analyze the correlation between pregnant women's knowledge and their behavior in consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring in 2019.

MATERIAL AND METHODS

This is a quantitative research with cross-sectional design, as the measurement of the independent variable (knowledge level) and dependent variable (women's behavior of consuming Fe tablets during pregnancy) are executed simultaneously. The research was conducted in Puskesmas Melayu Kota Piring in 2019 with 54 samples of pregnant women. The sample collection technique is accidental sampling. The data in this research is in the form of questionnaire. The data are examined using univariate analysis to see the distribution of percentage of each variable, while the bivariate analysis is utilized to know the correlation between independent and dependent variable (Notoatmodjo, 2012). The bivariate analysis in this research uses chi-square to see the existence of correlation between independent and dependent variable with $\alpha = 0.05$.

RESULT

To get the picture of pregnant women's age, education, knowledge level, and behavior, univariate analysis is conducted. The results are as the followings:

Table 1
The frequency distribution by age group in Puskesmas Melayu Kota Piring in 2019

No	Age	Frequency	%
1	< 20 years old	9	16.6%
2	20-35 years old	41	76%
3	>35 years old	4	7.4%
	Total	54	100%

The table above shows that there are 54 respondents, 9 (16.6%) of which are below 20 years old, 41 (76%) people are between 20 to 35 years old, dan 4 (7.4%) people are above 35 years old. The risk age for pregnant women are those below 20 years old (9 people, 16.6%) and above 35 years old (4 people, 7.4%), while people aged between 20 to 35 years old do not have risk.

Table 2
The frequency distribution of respondents by education in Puskesmas Melayu Kota Piring in 2019

No	Education	Frequency	%
1	Elementary School	25	46.3%
2	Junior High School	15	27.8%
3	Senior High School	12	22.2%
4	Higher Education	2	3.7%
	Total	54	100%

Table 2 shows that out of 54 respondents, 2 (3.7%) of them had higher education, 12 (22.2%) graduated from Senior High School, 15 (27.8%) from Junior High School, and the majority of them, 25 (46.3%), only graduated from Elementary School.

Table 3
The frequency distribution of respondents by knowledge on Fe tablet consumption during pregnancy in Puskesmas Melayu Kota Piring in 2019

No	Knowledge Level	Frequency	%
1	Low	32	59%
2	High	22	41%
	Total	54	100%

Table 3 shows that out of 54 respondents, 32 (59%) of them have low level of knowledge on Fe tablet consumption during pregnancy while 22 (41%) have high level of knowledge on the same issue.

Table 4
The frequency distribution by respondents' behavior of consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring in 2019

No	Behavior	Frequency	%
1	Bad	30	55.6%
2	Good	24	44.4%
	Total	54	100%

Table 4 above shows that out of 54 respondents, 30 (55.6%) of them have bad behavior while 24 (44.6%) have good behavior of consuming Fe tablets during pregnancy

Table 5
The correlation between pregnant women's level of knowledge and their behavior of consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring in 2019

Knowledge	Behavior				Total		*P value*
	Bad		Good				
	∑	%	∑	%	∑	%	
Low	23	71.9%	9	28.1%	32	100%	
High	7	31.8%	15	68.2%	22	100%	0.008
Total	**30**	**55.6%**	**24**	**44.4%**	**54**	**100%**	
x^2= 8.472		**df= 1**					

The cross tabulation as seen in table 5 shows that out 54 respondents, 23 (71.9%) of them have low level of knowledge and bad behavior, 9 (28.1%) people have low level of knowledge and good behavior, 7 (31.8%) people have high level of knowledge and bad behavior, and 15 (68.2%) people have high level of knowledge and good behavior.

DISCUSSION

The chi-square test in this research is conducted by calculating p-value and the score is 0.0008. Ho is rejected if $p \leq 0.05$, which means that independent variables and dependent variables are related. Ho fails to reject if p-value is 0.05, which means that there is no significant correlation between independent variables and dependent variables. The analysis shows that Ho is rejected and Ha is

accepted, which means that there is a correlation between pregnant women's knowledge and their behavior of consuming Fe tablets during pregnancy in Puskesmas Melayu Kota Piring in 2019. According to Wahit (2011), behavior is a set of action to respond to something; it then becomes a habit because there is a desired value. Human behavior basically consists of three components, namely knowledge (cognitive), attitude (affective), and skills (psychomotor). According to Bloom in Notoatmodjo (2005), there are several factors that influence human behavior. One of them is knowledge. A mother's knowledge on health can be obtained through health education conveyed by health workers. The knowledge obtained is expected to influence her behavior, especially a good influence which results in positive behavior. This research is in line with the previous research conducted by Erma Hesti Listiyana (2014), which discussed about the correlation between pregnant women's knowledge and their compliance in consuming Fe tablets in Brongkol village, Jambu Sub-district, Semarang District. Her research shows that low level of knowledge is related to poor compliance in consuming Fe tablets, with the exact number 13 (81.2%) and p-value 0.008 < 0.05. In accordance with Notoatmodjo's statement (2005), knowledge (cognitive) is an important domain for the formation of behavior, which includes the process of experience adoption. His research found that behavior which is based on knowledge will be more sustainable.

CONCLUSION

The result of the research proves Lawrence Green's statement that the predisposing factor which influences behavior is knowledge. High level of knowledge leads to good behavior.Therefore, it becomes clear that knowledge influences behavior. Pregnant women's high knowledge on Fe tablets will lead to good Fe tablet consumption during pregnancy and low knowledge will lead to bad behavior in the same issue.

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