ABSTRACT

Background: Anemia in pregnancy is a national problem because it reflects the value of the community socio-economic welfare, and has a significant influence on the quality of human resources. Based on the Baseline Health Research (Riskesdas) report (2018), the proportion of anemia has increased by 11.8% compared to 2013 report. The results of Baseline Health Research in 2018 show that in Indonesia the incidence of anemia in pregnant women was 48.9%. This number has increased in comparison with the Baseline Health Research data in 2013 amounted to 37.1% and 14.0% in 2007. Objectives: The purpose of the study was to determine the factors concerning adherence of pregnant women taking Fe tablets at Tulang Bawang 1 Health Center in 2021.

Methods: This study method was quantitative using an analytical survey. The population in this study were pregnant women in their second and third trimester registered at the TulangBawang I Health Center who experienced anemia amounting to 54 respondents as of July 16, 2021. The sampling technique used in this study was the Accidental Sampling. The sample size in this study was 54 respondents.

Results: The results showed that there was a significant relationship among knowledge (p value: 0.01, OR 1.72), education background (p value: 0.008), and attitude (p value 0.77) with the adherence of pregnant women to take Fe tablets at the TulangBawang I Health Center in 2021.

Conclusion: There was no relationship between family support (P value: 0.59) with the adherence of pregnant women to take Fe tablets at the TulangBawang I Health Center in 2021. Suggestions for respondents are that pregnant women are expected to add more insight to seek information from both health workers and the mass media and routinely attend classes for pregnant women so that they understand more about the importance of taking tablets Fe.

Keywords: Knowledge, Education, Attitude, Family support, Adherence of Taking Fe tablet pregnant women
INTRODUCTION

Iron deficiency anemia in pregnant women is a health problem experienced by women throughout the world, especially in developing countries. Anemia in pregnancy is a condition in which the body does not have enough healthy red blood cells. The direct causes of anemia are red blood cell damage due to malnutrition, the presence of toxic or pathogenic substances, heredity (genesis), Hodgkin's disease or cancer in storage organs and blood formation such as liver, spleen, and bone marrow, indirectly, namely knowledge, giving Fe tablets, health services and family support.

Based on the Riskesdas report (2018), the proportion of anemia has increased by 11.8% from 2013. The results of Riskesdas in 2018 show that in Indonesia the incidence of anemia in pregnant women is 48.9%. This has increased in number where the Riskesdas data in 2013 only amounted to 37.1% and 14.0% in 2007.

Based on the health profile of Lampung province in 2017, that shows from 24733 pregnant women in Lampung Province, there were 21,771 (88%). Pregnant women who have anemia are 8,435 (36.4%) with Hb levels of 8-11 g/dl and 810 pregnant women or (3.4%) with Hb levels < 8g/dl (Soleha, et al 2020).

The prevalence of anemia in pregnancy in Lampung Province is the highest on the island of Sumatra. The high number of anemia in Lampung Province is 69.7%, which is higher than the national nutritional anemia rate, which is 63%. While the incidence of anemia in pregnant women in Tulang Bawang Barat district in 2016 was (41.2%) in 2017 as much as (44.4%) and in 2018 as many as (45.7%). While in Mesuji Regency the incidence of anemia in pregnant women in 2017 was (35.3%) in 2017 as many as (32.3%) and in 2018 as many as (34.6%) (Profile of the Tulang Bawang District Health Office 2018).

Efforts to overcome anemia in pregnancy have been carried out by the Ministry of Health by distributing blood-added tablets to pregnant women. Pregnant women should take one tablet every day at least 90 tablets during pregnancy and this is usually given gradually and is best given in the third trimester (Over 7 months of pregnancy). Most of the anemia suffered by the community is due to iron deficiency which can be overcome through regular iron administration and improved nutrition. In addition, in rural areas there are many pregnant women with malnutrition or malnutrition, pregnant women with low education and socioeconomic levels (Manuaba, 2014).

Anemia can be prevented by increasing the consumption of nutritious foods, namely eating foods that contain lots of iron. Foods that contain lots of iron are foods that come from animal protein such as meat, poultry, fish, and some are derived from vegetable protein such as beans, and green vegetables. And it is also recommended to consume fruits that are rich in vitamin C to help absorb iron (Susiloningtyas, 2019).

Several researchers revealed that the incidence of anemia in pregnant women is related to the low level of compliance of pregnant women in consuming Fe tablets. The results of Regina Pricilia Yunika’s research, et al (2020) showed that the level of compliance of pregnant women in consuming Fe tablets at the Dasan Agung Public Health Center, Mataram City, but only 40% were obedient to taking Fe tablet supplements. Previous research by Septi Indah Permata Sari et al (2019) showed that the results of the level of knowledge of pregnant women about iron deficiency anemia were mostly categorized as adequate, namely 44.4%, most pregnant women were obedient to consuming Fe tablets, which was 59.8%, but the remaining 40.2% of pregnant women are not obedient. There is a significant relationship between the knowledge of pregnant women about iron deficiency anemia and the level of maternal compliance in consuming Fe tablets (P value = 0.000) (Septi Indah Permata Sari, 2019).

Many factors affect maternal compliance in consuming Fe tablets, among others, knowledge of mothers in consuming Fe tablets, family support, motivation, attitudes, side effects and benefits felt by mothers after consuming Fe tablets. Compliance with consuming iron tablets was measured from the accuracy of the number of tablets consumed, the accuracy of how to consume iron tablets, and the frequency of consumption per day.

Based on the results of the pre-survey at the Tulang Bawang I Health Center in January 2020 on 15 people by conducting free interviews, and randomly checking Hb levels and it was known that 9 people had Hb levels < 10 g/dl, and 6 others had Hb > 11 g/dl. etc. From the explanation above, researchers are interested in conducting research with the title "Factors related to the adherence of pregnant women to consume Fe tablets at the Tulang Bawang 1 Health Center in 2021".

RESEARCH METHODS

This research is a quantitative research using an analytical survey. Quantitative research is
research that has clear elements: objectives, approaches, subjects, and data sources. In the research step, everything is planned, can use samples and the research results are needed for the population (Notoadmojo, 2012).

The population in this study were pregnant women TM II and TM III at the Tulang Bawang I Health Center who experienced anemia totaling 54 respondents as of July 16, 2021. The sample in this study used the Accidental Sampling method as many as 54 respondents.

The design of this research is a Cross Sectional Study, where the variables of knowledge, education, attitudes, and family support are independent variables with respect to adherence to Fe tablet consumption in pregnant women who are observed at the same time.

RESULT

Univariate Analysis

Table 1.
Frequency Distribution Women Pregnants of Knowledge at Tulang Bawang Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less knowledge</td>
<td>11</td>
<td>20,4</td>
</tr>
<tr>
<td>Good knowledge</td>
<td>43</td>
<td>79,6</td>
</tr>
</tbody>
</table>

Based on table 1 the frequency distribution of respondents' knowledge, it can be seen that from 54 respondents, the results obtained were more respondents who had good knowledge, namely 43 respondents (79.6%).

Table 2.
Frequency Distribution Women Pregnants of Education at Tulang Bawang Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Education</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based</td>
<td>24</td>
<td>44,4</td>
</tr>
<tr>
<td>Midle</td>
<td>23</td>
<td>42,6</td>
</tr>
<tr>
<td>High</td>
<td>7</td>
<td>13,0</td>
</tr>
</tbody>
</table>

Based on table 2 of the distribution of the education frequency of respondents, it can be seen that from 54 respondents, there were more respondents who had basic education, namely as many as 24 respondents (44.4%).

Table 3
Frequency Distribution Women Pregnants of Attitude at Tulang Bawang Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Attitude</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatif</td>
<td>27</td>
<td>50,0</td>
</tr>
<tr>
<td>Positif</td>
<td>27</td>
<td>50,0</td>
</tr>
</tbody>
</table>

Based on table 3 of the attitude frequency distribution, it can be seen that from 54 respondents, the results obtained were that they had the same negative attitude and positive attitude, each of which was 27 respondents (50.0%).

Based on table 4 the frequency distribution of family support, it can be seen that from 54 respondents, the results obtained were more in good categories, namely 38 respondents (70.4%).

Table 4.
Frequency Distribution Women Pregnants of Family Support at Tulang Bawang Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Family Support</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatif</td>
<td>16</td>
<td>29,6</td>
</tr>
<tr>
<td>Positif</td>
<td>38</td>
<td>70,4</td>
</tr>
</tbody>
</table>

Table 5.
Frequency Distribution of adherence to women pregnant to consuming fe tablets At Tulang Bawang Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Adherence</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disobedient</td>
<td>36</td>
<td>66,7</td>
</tr>
<tr>
<td>Obedient</td>
<td>18</td>
<td>33,3</td>
</tr>
</tbody>
</table>

Based on table 4.6 the distribution of the frequency of adherence to consuming Fe tablets, it can be seen that from 54 respondents, there were more respondents who did not comply, namely 36 respondents (66.7%).
Bivariate Analysis

Table 6.
Correlation between Knowledge and Compliance with Fe Tablet Consumption in Pregnant Women At Tulang Bawang Puskesmas Tulang Bawang I in Since 2021

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Adherence</th>
<th></th>
<th></th>
<th>N</th>
<th>%</th>
<th>p value</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disobedient</td>
<td>Obedient</td>
<td></td>
<td>N</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less</td>
<td>11</td>
<td>100</td>
<td>0</td>
<td>0,0</td>
<td>11</td>
<td>100</td>
<td>0,01</td>
</tr>
<tr>
<td>Good</td>
<td>25</td>
<td>58,1</td>
<td>18</td>
<td>41,9</td>
<td>43</td>
<td>100</td>
<td>(1,33-2,22)</td>
</tr>
</tbody>
</table>

The results of the analysis of the correlation between knowledge and adherence of pregnant women to consume Fe tablets at the Tulang Bawang I Puskesmas in since 2021, obtained from 11 respondents with poor knowledge, all 11 respondents (100%) in the category of disobedient to consuming Fe tablets while from 43 respondents with good knowledge 25 respondents (58.1%) did not comply with consuming Fe tablets and 18 respondents (41.9%) complied with the consumption of Fe tablets. The results of the chi square statistical test obtained p value = 0.01 < 0.05, which means that there is a correlation between knowledge and adherence to pregnant women taking Fe tablets at the Tulang Bawang I Puskesmas in Since 2021. Poor knowledge has a 1.72 times chance of being disobedient to consuming Fe tablets compared to mothers with good knowledge.

The results of the analysis of the relationship between education and the adherence of pregnant women to consume Fe tablets at the Tulang Bawang I Health Center in 2021, obtained from 24 respondents with basic education there were 20 respondents (83.3%) who did not comply with consuming Fe tablets and 4 respondents (16.7%) obedient to consume Fe tablets. Meanwhile, from 23 respondents with secondary education, 10 respondents (43.5%) did not comply with consuming Fe tablets and 13 respondents (56.5%) complied with taking Fe tablets. The results of the chi square statistical test obtained p value = 0.008 < 0.05, which means that there is a relationship between education and the compliance of pregnant women in consuming Fe tablets at the Tulang Bawang I Health Center in 2021.

The results of the analysis of the relationship between attitudes and adherence of pregnant women to consume Fe tablets at the Tulang Bawang I Health Center in 2021, from 27 respondents with a negative attitude there were 19 respondents (70.4%) who did not comply with the consumption of Fe tablets and 8 respondents (29.6%) who complied. Meanwhile, of the 27 positive respondents there were 17 respondents (63.0%) who did not comply with the consumption of Fe tablets and 10 respondents (37.0%) who complied. The results of the chi square statistical test obtained p value = 0.77 > 0.05, which means that there is no relationship between attitude and compliance with pregnant women taking Fe tablets at the Tulang Bawang I Health Center in 2021.

Table 7.
Correlation Education with Adherence with Women Pregnant to Consuming Tablet at Tulang Bawang I Puskesmas in Since 2021

<table>
<thead>
<tr>
<th>Education</th>
<th>Adherence</th>
<th></th>
<th></th>
<th>N</th>
<th>%</th>
<th>p value</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disobedient</td>
<td>Obedient</td>
<td></td>
<td>n</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Based</td>
<td>20</td>
<td>83,3</td>
<td>4</td>
<td>16,7</td>
<td>24</td>
<td>100</td>
<td>0,008</td>
</tr>
<tr>
<td>Midle</td>
<td>10</td>
<td>43,5</td>
<td>13</td>
<td>56,5</td>
<td>23</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>14,3</td>
<td>6</td>
<td>85,7</td>
<td>7</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Dewi Astuti, Anggraini, Susilawati, Nita Erviana

Tabel 8.
Correlation between Attitude and Compliance with Fe Tablet Consumption in Pregnant Women at the Tulang Bawang I Puskemas in 2021

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Disobedient</th>
<th>Obedient</th>
<th>N</th>
<th>%</th>
<th>p value</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatif</td>
<td>19</td>
<td>70,4</td>
<td>8</td>
<td>29,6</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td>Positif</td>
<td>17</td>
<td>63,0</td>
<td>10</td>
<td>37,0</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 9.
Relationship between Family Support and Compliance with Fe Tablet Consumption in Pregnant Women at the Tulang Bawang I Health Center in 2021

<table>
<thead>
<tr>
<th>Family Support</th>
<th>Disobedient</th>
<th>Obedient</th>
<th>N</th>
<th>%</th>
<th>p value</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>less</td>
<td>12</td>
<td>75,0</td>
<td>4</td>
<td>25,0</td>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td>good</td>
<td>24</td>
<td>63,2</td>
<td>14</td>
<td>36,8</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

The results of the analysis of the relationship between family support and the adherence of pregnant women to consume Fe tablets at the Tulang Bawang I Health Center in 2021, obtained from 16 respondents with less family support, there were 12 respondents (75.0%) who did not comply with Fe tablets consumption and 4 respondents (25.0%). %) who complied with the consumption of Fe tablets. Meanwhile, from 38 respondents with good family support, 24 respondents (63.2%) did not comply with Fe tablet consumption and 14 respondents (36.8%) adhered to Fe tablet consumption. The results of the chi square statistical test obtained p value = 0.59 > 0.05, which means that there is no relationship between family support and the compliance of pregnant women in consuming Fe tablets at the Tulang Bawang I Health Center in 2021.

DISCUSSION

Knowledge

Knowledge is the result of human sensing, or the result of someone knowing about objects through the senses they have (eyes, nose, ears, and so on). Knowledge is the result of “knowing” and this occurs after people have sensed a certain object. (Notoadmodjo, 2014).

The results of this study are in line with the research of Zulkiflli Ahmad, Eva Priska Kushnermanto (2014) entitled Factors related to the adherence of pregnant women to consume Fe tablets at the Bojongoede Health Center, Bogor Regency. The results showed that most of the mothers had sufficient knowledge, namely 30 respondents (39.0%).

In the opinion of researchers, one's knowledge is usually influenced by many factors, including the level of education of respondents’ exposure to information media, where in this study there was no study of these variables, while the level of education in this study was dominated by basic education, namely 24 respondents (44.4%).

Education

Education means the guidance given by one person to another towards something so that they can understand. It is undeniable that the higher a person's education, the easier it is for them to receive information, and in the end the more knowledge they have. On the other hand, if a person has a low level of education, it will hinder the development of a person's attitude towards acceptance, information and newly introduced values.

The results of this study are in line with Sari (2014) with the title “The Relationship between Education Level of Pregnant Women and Midwife Service Behavior on Obedience of Pregnant Women in Consuming Fe Tablets at Gatak Health Center, Sukaharjo Regency. The results showed that most of the mothers with basic education level were 40 respondents (59.7%).

In the opinion of researchers, a person's level of education will affect his level of knowledge. The higher the education of pregnant women, the knowledge about nutrition will be better than those with low education.
Attitude

Attitude is a reaction or response that is still closed from a person to a stimulus or object. According to Newcomb in Notoatmodjo (2014), the attitude of a person affects how a person acts and looks for causes and solutions in his life. In addition, higher education allows pregnant women to have good knowledge about Fe tablets, the knowledge possessed by pregnant women provides a strong impetus to consume Fe tablets.

Relationship between knowledge and compliance with Fe tablet consumption

Regularity is the main key in supporting the success of the program, to prevent anemia during pregnancy. Iron deficiency since before pregnancy if not treated can cause pregnant women to suffer from anemia (Triveni & Okti, 2016).

The results of this study are not in line with the results of the study conducted by Regina Pricilia Yunika (2020), with the title “Relationship of Knowledge with the Level of Compliance in Consuming Fe Tablets at the Dasan Agung Public Health Center, Mataram City” showing that out of 35 respondents, mothers who were obedient in consuming Fe tablets with good knowledge were 8 respondents (22.9%). While mothers who are not obedient in consuming Fe tablets with less knowledge are 21 respondents (60%), and mothers who are not obedient in consuming Fe tablets with good knowledge, there are no respondents.

Relationship between education and compliance with Fe tablet consumption

The level of education greatly affects how a person acts and looks for causes and solutions in his life. In addition, higher education allows pregnant women to have good knowledge about Fe tablets, the definition of adherence to consuming iron tablets in the work area of the Seberang Padang Health Center in 2013. The results of the study were dominated by the non-compliant category, namely 79%.

In the opinion of researchers, the compliance of pregnant women is influenced by multifactors, including knowledge, education, and attitudes in this study. A person's compliance is also influenced by the support of the surrounding environment.

In the opinion of researchers, the attitude of pregnant women with adherence to consuming iron tablets. The results showed that the mother's attitude was dominated by the negative attitude category, namely 52%.

Family Support

Family support is assistance that can be given to other family members in the form of goods, services, information and advice that is able to make the recipients of support feel loved, appreciated, and at ease (Misgiyanto & Susilawati, 2014).

The results of this study are in line with Desmawati (2017), in the city of Padang also shows that pregnant women who are obedient to taking iron tablets are pregnant women who receive support from their families (90.0%), 05 (p = 0.001), meaning that there is a significant relationship between family support for pregnant women and adherence to consuming iron tablets.

In the opinion of the researcher in this study, family support was in either category, this is because one of the family functions or the role of the family is the health care function and one of the health tasks that must be carried out by the family is providing care to sick family members, so that the family who is the closest person who has good knowledge about Fe tablet tablets.

Compliance

The definition of adherence to consuming iron tablets is the obedience of pregnant women to carry out the recommendations of health workers to consume iron tablets. Compliance according to Sachet in patients as the extent to which individual behavior is in accordance with the provisions given by health professionals (Erwin, 2017).

The results of this study are in line with research conducted by Erwin et al, 2013 regarding “the relationship between the level of knowledge and attitudes of pregnant women with adherence to consuming Fe tablets at the Dasan Agung Public Health Center, Mataram City.”

According to researchers, the compliance of pregnant women in consuming Fe according to the recommendations of health workers is the impact of their ignorance about the importance of adequate iron intake during pregnancy.
The results of this study are in line with the bivariate analysis that has been carried out by Desmawati (2017), in the city of Padang also shows that pregnant women who obey consume iron tablets more than pregnant women with high school education (≥SMA) by 66.7%. This is consistent with the theory that education is one of the factors that support patient compliance (Niven, 2002). There is a contribution of education in knowledge to health behavior change. In addition, according to Arisman (2009) pregnant women with low education generally never know iron tablets during pregnancy.

In the opinion of researchers, many factors affect the level of maternal compliance, compliance is a change in behavior from the initial act that begins with increasing knowledge. There is no relationship between education and compliance because knowledge can be obtained not only from formal education, attending classes for pregnant women on a regular basis will increase the mother’s knowledge about nutrition during pregnancy.

**Relationship between Attitude and Compliance with taking Fe tablets**

Attitude is a predisposition for the formation of an action. Pregnant women who have a positive attitude will tend to act obediently in consuming iron tablets, whereas pregnant women who have a negative attitude will tend to act disobediently in consuming iron tablets during pregnancy. A negative attitude can create disobedient actions (Yunikka and Husnita, 2020)

The results of this study are in line with Desmawati (2017), in the city of Padang also shows that respondents who are obedient in consuming iron tablets are respondents who have a positive attitude towards consuming iron tablets. 90.0%. Based on the statistical test using chi square obtained p value <0.05 (p = 0.003) which means that there is a significant relationship between the attitude of pregnant women and adherence to consuming iron tablets.

In the opinion of the researcher, one's attitude towards health behavior, which in this case is consuming Fe tablets, is not only influenced by one's knowledge but many factors in one's health behavior including support from family, living environment and the role of health workers.

Family support according to Friedman (2013) is an attitude, an act of family acceptance of family members, in the form of informational support, assessment support, instrumental support and emotional support. So family support is a form of interpersonal relationship that includes attitudes, actions and acceptance of family members, so that family members feel that someone is paying attention. The results of this study are not in line with Desmawati (2017), in the city of Padang also shows that pregnant women who are obedient to taking iron tablets are pregnant women who receive support from their families (90.0%). Based on statistical tests using chi square, p value < 0.05 (p = 0.001), meaning that there is a significant relationship between family support for pregnant women and adherence to consuming iron tablets.

In the opinion of researchers, family support is not related to compliance with Fe tablet consumption because the support provided is not directly in the sense that the family supports the mother to consume Fe tablets but the family does not do it in terms of monitoring.

**CONCLUSION**

There is a relationship between knowledge and adherence of pregnant women to consume Fe tablets at the Tulang Bawang I Health Center in 2021 (p value: 0.01, OR 1.72)

There is a relationship between education and the compliance of pregnant women in consuming Fe tablets at the Tulang Bawang I Health Center in 2021 (p value: 0.008)

There is no relationship between attitude and compliance with pregnant women consuming Fe tablets at the Tulang Bawang I Health Center in 2021 (p value 0.77).

There is no relationship between family support and the compliance of pregnant women in consuming Fe tablets at the Tulang Bawang I Health Center in 2021 (P value: 0.59)

**SUGGESTION**

Diharapkan ibu menambah wawasan lebih banyak mencari informasi baik dari tenaga kesehatan maupun media massa dan rutin mengikuti kelas ibu hamil agar ibu lebih memahami tentang pentingnya mengkonsumsi tablet Fe

**REFERENCE**


Profil Kesehatan Provinsi Lampung (2019)

Proverawati, A., (2018), Anemia dan Anemia Kehamilan, Nuha Medika, Yogyakarta


Wawan dan Dewi, (2010), Teori dan Pengukuran Pengetahuan, Sikap dan Perilaku Manusia, Yogyakarta, Nuha Medika