The Effect of Date Juice to Increase of Hemoglobin Levels on Pregnant Woman Anemia

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ABSTRACT

Anemia is a state when hemoglobin levels, hematocrit and erythrocyte amounts fall below normal values. The benefits of date palm juice for pregnant women are very important to know. The nutrients contained in date juice are magnesium, iron, folic acid, vitamin A, vitamin B6, and vitamin K. The purpose of this study was to analyze The Effect of Date Juice to increase of hemoglobin Levels on Pregnant Women Anemia. The research method used is a quasi-experimental experiment with a pre-experimental form, One Group Pre-Test-Post Test. The effect of date juice to increase of hemoglobin Levels on Pregnant Women Anemia. The results of the bivariate table is 0.275 <0.05 with a standard deviation of 0.2469. Based on the results of the T-test test obtained p value = 0.000. It is expected that clinical leaders and health workers to apply non-pharmacological therapy by providing information to pregnant women and families to consume date palm juice during pregnancy to help prevent anemia.

Keywords: Date Juice, Hemoglobin Levels, Pregnant Woman, Anemia

INTRODUCTION

Anemia is a state when hemoglobin, hematocrit and erythrocyte levels drop below normal values. In people with anemia, this condition is often called lack of blood because the level of red blood cells (hemoglobin or Hb) is below normal values. The cause is common due to nutritional deficiencies for blood formation, such as iron, folic acid, and vitamin B12 (Dian Purwitaningtyas Kirana, 2011).

According to who (sWorld Health Organization) in 2019, anemia generally occurs worldwide, especially in developing countries and in low socio-economic groups. In the adult group, anemia occurs in women of reproductive age, especially pregnant women and nursing women because they experience a lot of iron defeseence (Sari et al., 2019).

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According to the Ministry of Health (2018), as many as 48.9% of pregnant women in Indonesia have anemia. The results of research from the Faculty of Medicine throughout Indonesia showed that the prevalence of anemia of pregnant women in Indonesia as much as 50-63% of pregnant women (Pemiliana et al., 2019).

Based on cities in North Sumatra Province in 2017 The percentage of coverage of pregnant women who experienced is (75.85%) pregnant women, an increase compared to 2016 (73.31%) pregnant women. With the percentage of coverage, the coverage of iron tablets in pregnancy has not been able to reach the national target set at 80% (SARAGIH, 2019).

Based on the Health Profile of Medan Year 2017 based on a survey of anemia carried out by health workers at the health center in Medan Johor get in 2017 of 202 pregnant women were examined there are 79 maternal Hb (39,1%) were anemia. Every pregnant woman who visits the health center for the first time is checked for Hb (Pardede, 2019).

The results of Yollanda Mentiana’s research entitled the effect of giving date palm juice on the hemoglobin levels of pregnant women in the third trimester in the working area of Paying Sekaki Health Center Pekanbaru City. using purposive sampling technique, the intervention of giving date palm juice for 7 days was 3 x 15 ml per day. Data collection uses observation sheets and measurement of hemoglobin levels. The research design was pre-experimental with One group pretest-posttest design. This study used a T-dependent test, the average result of the third trimester pregnant women’s hemoglobin levels before being given date palm juice was 12.3 g/dl and after being given date palm juice was 13.2 g/dl. Based on the T-dependent test, it was found that p value = 0.000, which means that there was an effect of giving date juice on the hemoglobin level of pregnant women in the third trimester with an average increase of 0.9 g/dl (Yollanda Mentiana, 2021).

The results of the research by Wira Maria Ginting With the title the effect of giving dates to increasing hemoglobin levels in pregnant women with anemia. The study used a quantitative research design with a quasi-experimental type with one group test where the respondents studied were only one group where the group was measured for Hb and measured again after being given dates. The results obtained based on the analysis of paired T-test obtained p-value 0.000 <a = 0.05, so the hypothesis is accepted, and it can be concluded that there is an effect of giving dates on increasing hemoglobin levels in pregnant women with anemia (Ginting, 2021).

Based on the research of Sugita, Kuswati with the title of the effect of consumption of dates on increasing hemoglobin levels in third trimester pregnant women and important for pregnant women who are lazy to take Fe tablets, it is very useful for increasing hemoglobin which has been proven from my research results. Based on statistical tests that have been carried out showing that the average hemoglobin of pregnant women in the treatment group before was 10,793 g/dl. The average hemoglobin level after consumption of dates is 11,933 g/dl, so the difference between the pre and post mean values is 1.140 with a standard deviation of 0.6643. Statistical test results obtained p value <0.05 (0.002 <0.05) so is rejected, Ha is accepted which can be concluded that there is a significant difference in hemoglobin levels between before and after (pre test and post test). This explains that there is an effect of consumption of dates on the increase in hemoglobin levels of pregnant women in the third trimester in the working area of the Klateng Health Center (Sugita & Kuswati, 2020).

The results of a preliminary survey conducted by researchers at the Pratama Hanum Clinic Jl. KL.Yos Sudarso Gg Registrar No.47, the researchers interviewed 5 pregnant women in the third trimester who checked their pregnancies at the Hanum Pratama Clinic, including 3 pregnant women who were anemic because the researchers conducted Hb checks using Hb sahli with the average results of the mother’s Hb pregnant women around 9-10% g and 2 third trimester pregnant women do not experience anemia because the Hb of the 2 pregnant women is normal around 10-11% g.
The purpose of the study was to determine or analyze The Effect of Date Juice to increase hemoglobin Levels on Pregnant Women Anemia.

**RESEARCH METHODS**

This study uses inclusion criteria, namely willing respondents, pregnant women who experience third trimester anemia, mothers who like dates and exclusion criteria, namely respondents who are not willing and third trimester pregnant women who have given birth (Novyriana & Caesarani, 2019).

The population in this study was 20 people and according to the inclusion and exclusion criteria as many as 15 people so that the sampling technique was taken using purposive sampling where the researchers had their own considerations to conduct research (Nurdin & Hartati, 2019).

Bivariate analysis was carried out to see the effect of giving dates on hemoglobin levels in third trimester pregnant women who experienced anemia after giving date juice and to see if there were differences in the increase in hemoglobin levels. The results of the paired T-test showed that the p value of 0.000 < 0.05 means that there is an effect of giving dates on hemoglobin levels with the incidence of anemia in third trimester pregnant women and vice versa if the p value > 0.05 means that there is no effect of giving dates to hemoglobin levels with the incidence of anemia in third trimester pregnant women.

**RESULT**

The research that has been conducted at the Hanum Pratama Clinic Medan in 2020 regarding the effect of giving date palm juice on the hemoglobin levels of pregnant women who experience anemia can be seen in the table below:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Third Trimester Pregnant Hemoglobin Levels Who Have Anemia Before Giving Dates Extract</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Hemoglobin levels before giving dates</td>
</tr>
<tr>
<td>1.</td>
<td>Hb levels before giving dates</td>
</tr>
<tr>
<td>2.</td>
<td>Hb levels after giving dates</td>
</tr>
</tbody>
</table>

Source: primary data research results in 2020

Based on table 1 above, it can be seen that the average hemoglobin level of respondents who suffered from anemia before being given date juice was 9.467 g/dL. The lowest hemoglobin level was 9.0 g/dL and the highest was 10.0 g/dL.

Based on table 2 above, it can be seen that the average hemoglobin level of respondents who suffer from anemia after being given date juice is 11.333 g/dL. The lowest hemoglobin level was 11.0 g/dL and the highest was 11.8 g/dL.

**Bivariate Analysis**
The Effect of Date Juice to Increase of Hemoglobin Levels on Pregnant Woman Anemia (Riska Maulidanita)

Furthermore, to analyze the difference in the administration of date palm juice on the hemoglobin levels of pregnant women in the third trimester who experienced anemia at the Hanum Pratama Clinic, Medan in 2020, the data normality test was used with the following results:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondent</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin levels</td>
<td>Hb levels before giving dates</td>
<td>0.930</td>
</tr>
<tr>
<td></td>
<td>Hb levels after giving dates</td>
<td>0.940</td>
</tr>
<tr>
<td></td>
<td></td>
<td>df=20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig=0.275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig=0.381</td>
</tr>
</tbody>
</table>

Source: primary data research results in 2020

Based on table 2, it can be seen that the sig value in each variable is > 0.05, Hb levels before giving dates 0.275<0.05 and Ha accepted and Hb levels after giving dates 0.381<0.05 and Ha accepted.

<table>
<thead>
<tr>
<th>Variable</th>
<th>mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin levels</td>
<td>Hb level before - Hb level after</td>
<td>1.8667</td>
<td>0.2469</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: primary data research results in 2020

Based on table 3, obtained a standard deviation of 0.2469 and a standard error of 0.0637 with a p-value of 0.000. meaning that there are differences in hemoglobin levels before and after administration of date juice.

DISCUSSION

Based on the results of the study, it was found that the average hemoglobin level of respondents who suffered from anemia before being given date juice was 9.467 g/dL. The lowest hemoglobin level was 9.0 g/dL and the highest was 10.0 g/dL.

According to the researcher’s assumptions, based on the results of research on pregnant women, pregnant women in the third trimester are prone to anemia. This is in line with Seri’s theory that the number of people with anemia increases with increasing gestational age. Protect the mother and fetus and at the time of delivery. During pregnancy the need for iron also increases, due to the influence of the fetus in the mother’s womb. The results showed that as many as 80% of anemic mothers were mothers aged 20-35 years and it was a safe age for pregnancy and childbirth. This shows that the occurrence of major anemia is influenced by a lack of iron intake during pregnancy because of the increase in iron requirements for the fetus during pregnancy, the older the gestational
age, the need for iron also increases and the effect of increasing blood volume will reduce iron reserves in the body. mother’s body (Nugraheni, 2018).

Based on the results of the study, it was found that the average hemoglobin level of respondents who suffered from anemia after being given date juice was 11.333 g/dL. The lowest hemoglobin level was 11.0 g/dL and the highest was 11.8 g/dL.

According to the researcher’s assumptions, based on the results of the study, giving date palm juice for 7 days with a frequency of 3 times a day showed very significant results in increasing blood hemoglobin during pregnancy. The research data showed that the average difference in hemoglobin levels after being given date juice was 1.8667 and the data showed that 15 pregnant women (100%) who had mild anemia experienced an increase in hemoglobin levels after 15 people (100 people) were given date juice. %) is no longer anemic. In line with Badwilan’s theory that dates contain minerals that the body needs such as potassium, sodium, calcium, iron, manganese, and copper, potassium.

The presence of iron content in dates can meet the daily requirement of 5% and high levels of iron in dates have proven to be very effective in overcoming iron deficiency during pregnancy. Research conducted by Susilowati (2017) assumes that gestational age has a relationship with pregnancy rates, because the greater the gestational age, the more blood and nutrients that must be circulated in the body (Arifin, 2008).

Based on the results of the study showed that the average difference in hemoglobin levels of pregnant women in the third trimester was 1.8667 g/dL with a standard deviation of 0.2469 g/dL. The statistical test results obtained sig 0.000 which means the difference in hemoglobin levels before and after administration of date juice in Third trimester pregnant women who experience anemia at the Hanum Pratama Clinic Medan in 2020. In line with the research conducted by Wiulim Seiowati and Siti Nuriah with the title the effect of giving date palm juice on hemoglobin levels of pregnant women (Setiowati, 2018). Dates are fruits obtained from palm trees and are thought to have come from land near Iraq, centuries ago. although the fruit can be eaten fresh and enjoyed and, dried form (Nasution et al., 2019).

According to the researcher’s assumptions, based on the results of research conducted on pregnant women in the third trimester who experienced anemia by giving date palm juice for 7 days, it showed significant results in increasing blood hemoglobin levels. During the administration of date palm juice 3 times a day for 7 days, it was found that the hemoglobin level increased by an average of 1.8667 g/dL. The results showed that before being given date palm juice as many as 15 people (100%) pregnant women experienced mild anemia and after being given date juice pregnant women as many as 15 people (100%) were no longer anemic. This shows that by giving date palm juice 3 times a day, it is certain that pregnant women can avoid the risk of anemia during pregnancy. The presence of iron in the dates studied was able to provide 5% of the daily need for iron in pregnant women, in addition to the content of carbohydrates, protein, vitamins (A, C, B complex, thiamine, riboflavin, niacin, and folic acid), minerals (potassium, calcium, iron, phosphorus, selenium, magnesium, sodium, cobalt and zinc), and fiber that can meet the nutritional needs of pregnant women and their fetuses.

CONCLUSIONS

Suggestions for further researchers are expected that this research can provide information and as a useful reference in the development of science and further scientific research. Further researchers can add methods and comparisons between date palm juice and other plants that have the same effect in increasing hemoglobin levels during pregnancy.

It is hoped that the results of this study can provide information and as a useful reference in the development of science and further scientific research, as well as to further researchers who wish to continue this research adding methods and comparisons between date palm juice and other plants.
that have the same effect in increasing hemoglobin levels during pregnant and using a variety of different research methods and analyses.

REFERENCES


