

**RESEARCH TITLE**

**Evaluation of Level Awareness of Pregnant Women on Anemia during Pregnancy in “Zliten Medical Center”**

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**Abstract**

There are many causes of anemia but malnutrition is the main cause, such as iron deficiency, vitamin deficiency (vitamin B12), huge bleeding due physical injuries and during menstruation that lead to loss of red blood cells, in some cases the body itself destroy the red blood cells and the body doesn't form the red blood cells, certain infection diseases such as HIV, AIDS, and tuberculosis linked, In this study among 100 participants, in Obstetrics and Gynecology Department in Zliten Medical Center for the whole month of December 2020. The Objective of this study to evaluate the level of awareness of pregnant mothers on their knowledge of anemia during pregnancy in Zliten Medical Center.

**Key Words:** *Anemia, Pregnancy, Medical, hemoglobin*

## Introduction

According to the world health organization (WHO) anemia is a condition in which the number of red blood cells (RBCs) or their oxygen-carrying capacity is insufficient to meet physiologic needs. Anemia is the major public health issue in worldwide now a days ,is a pervasive global public health problem, an estimated 2 billion people are affected or more than one third of the world's population.<sup>(1),(2)</sup>

Anemia is defined as blood hemoglobin level less than 13 g/dl in men and less than 12.0 g/dl in women established cut-off points, anemia prevalence is highest in developing countries, although both males and females of all ages are affected, the most vulnerable groups are pregnant women and young children, Worldwide, more than 40% of pregnant women and over 30% of all women suffer from anemia.<sup>(2)</sup>

Anemia in pregnancy is defined as hemoglobin (HGB) concentration less than 11g/dl throughout pregnancy according to the World Health Organization (WHO). In normal pregnancy, beginning at the end of the first trimester there are physiologic expansion of the plasma volume of about 50% and an increase of red blood cell (RBC) of about 30%. This disproportional increase in plasma and (RBCs) reduces the (HGB) concentration of the pregnant woman and depending on the (HGB) concentration, prior to this expansion and the pregnant woman could be rendered anemic.<sup>(3)</sup>

Globally, the most common cause of anemia is iron deficiency, which is responsible for about half of anemia cases in pregnancy, it is estimated in development countries, and about 38% of pregnant women had iron depletion.<sup>(4)</sup>

The awareness of anemia is very important especially in pregnant women, awareness about follow a balanced diet and awareness of signs and symptoms of anemia during pregnancy, Increased awareness reduces anemia during pregnancy between pregnant women.<sup>(5)</sup>

### Problem statement:

1. Anemia is considered one of the most common reasons of hospitalization in department of obstetrics.
2. There are increasing incidence of maternal and fetal death due to complications like hemorrhage, premature delivery and respiratory and cardiac problems due to anemia of pregnancy.
3. Insufficient of knowledge and awareness of mothers on anemia during the pregnancy period due to early marriage and lack readiness for motherhood.<sup>(6)</sup>

### Significance:

1. This study is focused on the level of awareness of anemia during pregnancy in the Zliten Medical Center
2. To propose methods for increasing level awareness of anemia during pregnancy among pregnant women in the Zliten Medical Center.
3. Organizing awareness-raising seminars for pregnant women, this is to increase awareness about anemia.

### Diagnostic Tests of Anemia

Often, the first test is a complete blood count (CBC), CBC is a broad-scale test that provides a count of all the RBCs, white blood cells (WBCs) and platelets in a sample of pregnant blood. It also includes other tests that provide information about pregnant mother blood,<sup>(13)</sup> most pregnant women with folate or cobalamin deficiency do not exhibit macrocytosis, which may be masked by iron deficiency or

by an underlying minor thalassemia phenotype. Furthermore, 2% to 5% of pregnant mother with normocytic anemia have mild megaloblastic changes in the bone marrow that resolve with folic acid supplementation. The full blood test must be conducted during pregnancy at the first trimester and third trimester to check levels of hemoglobin in the blood. So complications during pregnancy must be prevented.

### Results of Data Analysis

#### - Number of Respondents for every Age Category

The data gathered of 100 respondents in Zliten Medical Center, the highest percentage rate for number of respondent's in age category for the awareness of anemia during pregnancy period was 27% from 18 to 25 years old. The least percentage rate was 23% in less than 18 years old. Table 1.0 and Figure 1.0

Table 1: Number of Respondents for every Age Category

Age	Number of Respondents	Percentage Rate
Less than 18	23	23%
18 - 25	27	27%
26 - 35	26	26%
More than 35	24	24%
Total	100	100%

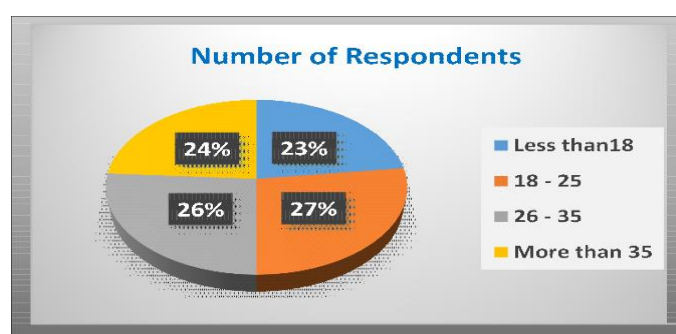


Figure 1: Number of Respondents for every Age Category

#### - Number of Respondents for Education Attainment Level Category

The data gathered from 100 respondents in Zliten Medical Center, the highest percentage rate for number of respondents in Educational level category was 34% in high school level and college level was 34%. Next is from elementary level which reveals 29%, and the least is graduate study was only 3%. Table 2.0 and Figure 2.0

Table 2.0-Number of Respondents for Education Attainment Level Category

Education Level	Number of Respondents	Percentage Rate
Elementary	29	29%
High School	34	34%
College	34	34%
Graduate Studies	3	3%
Total	100	100%

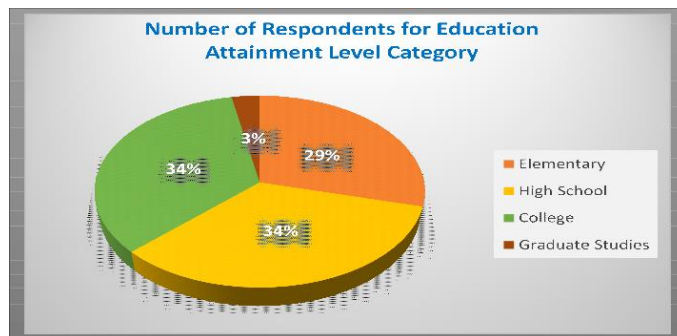


Figure 2.0-Number of Respondents for Education Attainment Level Category

**- Number of Respondents for every Number of Pregnancy Category**

The data gathered from 100 respondents in Zliten Medical Center, highest percentage rate for number of respondents in Number of pregnancy category was 72% in the Multi-Gravida and the least percentage rate was 28% in Prime Gravida. Table 3.0 and Figure 3.0

Table 3.0-Number of Respondents for every Number of Pregnancy Category

Number of Pregnancy	Number of Respondents	Percentage Rate
Prime Gravida	28	28%
Multi Gravida	72	72%
Total	100	100%

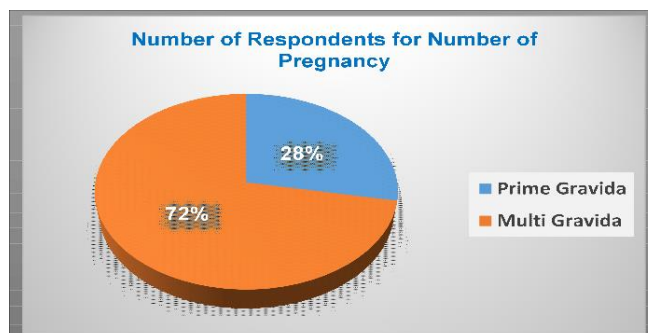


Figure 3.0-Number of Respondents for every Number of Pregnancy Category

**- Distribution of Data Survey Percentage Based on Age Category**

Represents the general average of 20 data questions based on age category surveys from 100 respondents of Zliten Medical Center. The highest percentage rate in “awareness” age category was 26 – 35 years old with 22% rate, while the least percentage rate in “awareness” was less than 18 years old with 15.1% rate. The highest percentage rate “unaware” in age category in less than 18 years was 7.9% and less percentage rate "unaware" in 26-35 years was 4% and in Table 4.0

Table 4.0-Distribution of Data Survey Percentage Based on Age Category

Age	Awareness	Unaware
Less than 18	15.1	7.9
18 - 25	21.1	5.9
26 - 35	22	4
More than 35	19.8	4.2
Total Ave	78%	22%

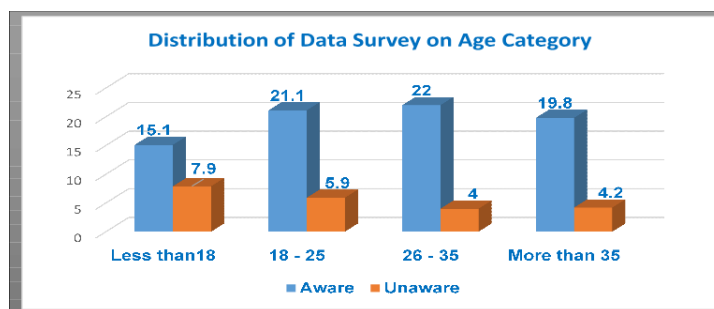


Figure 4.1-Distribution of Data Survey Percentage Based on Age Category

**Summary of Age for Awareness in anemia during pregnancy period**

The data analyzed and we found 78% was awareness of pregnant mothers about anemia during pregnancy and 22 % was unaware of pregnant mothers about anemia during pregnancy period. Figure 4.0.

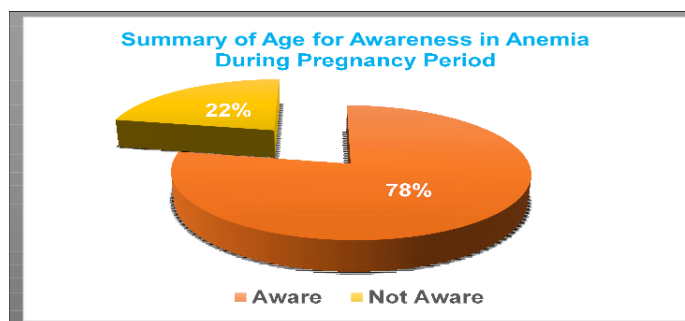


Figure 4.2-Summary of Age for Awareness in anemia during pregnancy period

**- Distribution of Data Survey Percentage Based on Educational Attainment Category**

Represents the general average of 20 data questions based on educational attainment category surveys from 100 respondents of Zliten Medical Center. The highest percentage rate in “awareness” educational level was 29% in college level and the least percentage rate in “awareness” was 2.45% in Graduate Studies. The highest percentage rate in “unaware” educational level was 9.6% in High School and least percentage rate in "unaware" was 0.55% in Graduate Studies.. Table 5.0

Table 5.0-Distribution of Data Survey Percentage Based on Educational Attainment Category

Education Level	Awareness	Unaware
Elementary	22.15	6.85
High School	24.3	9.6
College	29	5
Graduate Studies	2.45	0.55
Total Ave	78%	22%

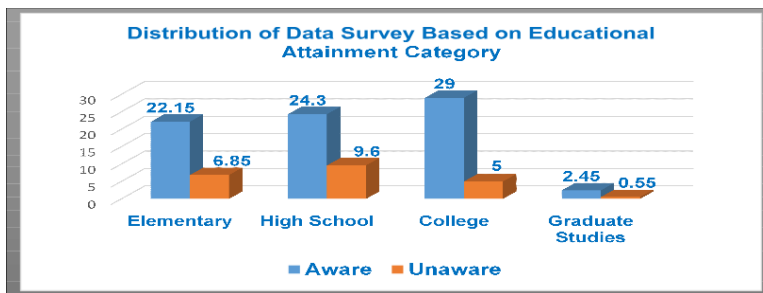


Figure 5.1-Distribution of Data Survey Percentage Based on Educational Attainment Category

**- Summary of Educational Attainment in Awareness of Anemia During Pregnancy Period**

The data analyzed, the awareness rate of education level was 78% in awareness of pregnant mothers of anemia during pregnancy, and 22% was unaware of pregnant mothers of anemia during pregnancy. Figure 5.2.

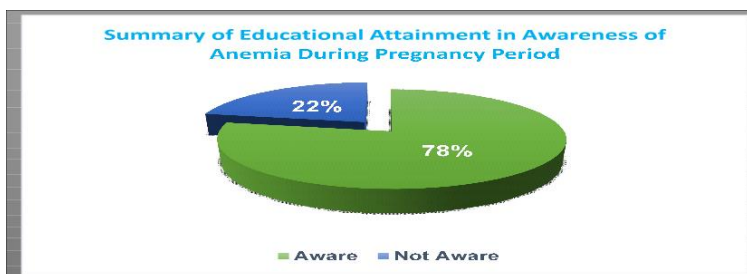


Figure 5.2-Summary of Educational Attainment in Awareness of Anemia During Pregnancy Period

**- Distribution of Data Survey Percentage Based on Number of Pregnancy Category**

Represents the general average of 20 data questions based on number of pregnancy category surveys from 100 respondents of Zliten Medical Center. The highest percentage rate in “awareness” level for number of pregnancy category was 57.15% in Multi Gravida and the least percentage rate “awareness” was 20.58% in Prime Gravida. The highest percentage rate in “unawareness” level for number of pregnancy was 14.85% in Multi Gravida and least percentage rate in “unawareness” was 7.15% in Prime Gravida. Table 6.0

Table 6.0-Distribution of Data Survey Percentage Based on Number of Pregnancy Category

Number of Pregnancy	Awareness	Unawareness
Prime Gravida	20.85	7.15
Multi Gravida	57.15	14.85
Total Ave	78%	22%

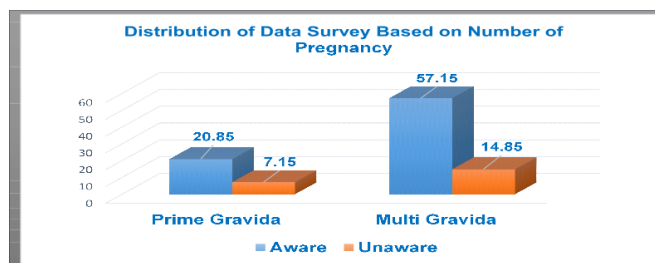


Figure 6.1-Distribution of Data Survey Percentage Based on Number of Pregnancy Category

### - Summary of Number of Pregnancy in Awareness of Anemia During Pregnancy period

Represents the awareness of number of pregnancy was 78%in “awareness” and 22%was “unaware” for awareness of anemia during pregnancy period. Figure 6.1

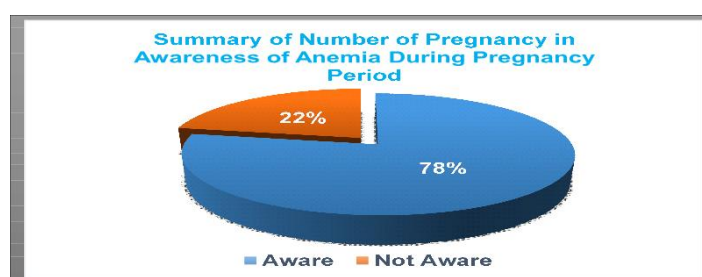


Figure 6.2-Summary of Number of Pregnancy in Awareness of Anemia during Pregnancy period

### Conclusions

the percentage of Educational level category was 78%awareness and 22% was unaware, and the highest percentage rate for awareness in Educational level was 29% in College level and the highest percentage rate for unaware in Educational level was 9.6% in High School level. The result is agreed with previous study conducted in South Ethiopia in 2017, the study showed the highest percentage rate for awareness was 25.2% in College level and the percentage rate for awareness was 6.5% in Secondary level. Also agreed with the study in Iraq in 2019 the study showed the highest percentage rate for awareness of pregnant women was 30% in College level.

In the result, the percentage rate for Number of Pregnancy category was 78% awareness and 22% was unaware .The percentage rate for awareness was 20.85% in Prime Gravida 57.15% in Multi Gravida. The percentage rate for unaware was 7.15% in Prime Gravida and 14.85% in Multi Gravida. The result agreed with previous study conducted in India in 2019, the study show the percentage rate for awareness was 7.8% in prime Gravida and 69% in Multi Gravida. Also agreed with the study in Eastern Ethiopia in 2018, the study showed percentage rate of knowledge of iron deficiency anemia was 61% in good awareness and 39% in poor awareness.

A summary of the findings of the study can be made in the following points:

1. Based on the data collected from 100 a sample the group of researchers conclude that the level of awareness for data distributions on each testing tools such as age educational attainment and number pregnancy was 78% respectively compared to unaware was 22%.

2. Through distribution for Age category, the highest percentage rate in awareness was 22% for age 26-35 years old, and the highest percentage rate in unaware was 7.9% in less than 18 years old.
3. Through distribution for the Educational level category, the highest percentage rate in awareness was 29% in College level, and the highest percentage rate in unaware was 9.6% in High School.
4. Through distribution for Number of Pregnancy category, the highest percentage rate in awareness was 57.15% in Multi Gravida and 20.58% in Prime Gravida, and the highest percentage rate in unaware was 14.85% in Multi Gravida and 7.15% in Prime Gravida.

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