

# [Womens health education on anemia and its dangers](https://assignbuster.com/womens-health-education-on-anemia-and-its-dangers/)

Anemia is a common global public health problem (GPHP) affecting both developing and developed countries with major consequences for human health as well as social and economic development. It occurs at all stages of the life cycle, but is more prevalent in pregnant women and young children in both rich and poor countries. In 2002, iron deficiency anemia (IDA) was considered to be among the most important contributing factors to the global burden of disease (1).

Anemia is one of the most common factors complicating pregnancy worldwide specially in the development countries, and Palestine is one among of those countries . In Gaza strip , an overall prevalence of anemia is more than 35% among pregnant women . most studies have demonstrated adverse effects of anemia to both pregnant women and their offsprings mainly in developing countries due to several factors. The more etiologic factor for anemia among pregnancy being iron and folic acid deficiency(2-4)

Anemia is the result of a wide variety of causes that can be isolated, but more often coexist. Globally, the most significant contributor to the onset of anemia is iron deficiency so that IDA and anemia are often used synonymously, and the prevalence of anemia has often been used as a proxy for IDA. It is generally assumed that 50% of the cases of anemia are due to iron deficiency (5), but the proportion may vary among population groups and in different areas according to the local conditions. The main risk factors for IDA include a low intake of iron, poor absorption of iron from diets high in phytate or phenolic compounds, and period of life when iron requirements are especially high (i. e. growth and

pregnancy).

Among the other causes of anemia, heavy blood loss as a result of menstruation, or parasite infections such as hookworms and ascaris can decrease blood haemoglobin (Hb) concentrations level. Acute and chronic infections, including malaria, HIV, tuberculosis, and cancer can also lower blood Hb concentrations level. The existence of other micronutrient deficiencies, including vitamins A and B12, folate,

riboflavin, and copper can increase the risk of anemia. Furthermore,

the impact of haemoglobinopathies on anemia prevalence needs to be

within some population.

Anemia is an indicator of both poor nutrition and poor health. The most dramatic health effects of anemia, i. e., increased risk of maternal and child mortality due to severe anemia (6-8).

To tackle the problem of iron deficiency and anemia, WHO recommended the adoption of a multidisciplinary approach tailored to specific circumstances including increased iron intake, public health measures and food versification. Consistent with this strategy, UNRWA implemented a programme for prevention and treatment of iron deficiency anemia. comprising medicinal iron supplementation, fortification of wheat flour distributed to the target groups benefiting from the Agency’s regular and emergency food aid programmes, and expanding the use of modern contraceptive methods (3, 4).

In addition, the negative consequences of IDA on cognitive and physical

development of children, and on physical performance – particularly work productivity in adults – are of major concern (5).

Previous studies have shown a very high prevalence of anemia among Palestinian refugees specially among antenatal mothers(3).

Hence , it is essential that in Palestine, especially in Gaza strip the women should be aware of anemia to reduce the complication during pregnancy.

## Objectives of the study

1-To assess the level of awareness and public knowledge of anemia among the Palestinian refugee pregnant women in Gaza strip.

2-To assess if there is a difference between women with and without health education session.

3-To develop a baseline data regarding awareness of anemia among pregnant women for further studies.

## Scope of the study

The study aims to assess the level of public knowledge and awareness of anemia among pregnant women who attended UNRWA health care centers(HCCs) for antenatal care in the middle district of Gaza strip by collecting the information from 164 women from four UNRWA health care centers in Gaza.

## Hypothesis

1-The Palestinian refugee pregnant women were awareness and had

a knowledge of anemia at a medium level .

2-There is a difference between women with and without health education session regarding anemia .

## Benefits of the study

1-To know the knowledge and awareness regarding anemia among pregnant women living in Gaza strip and who are attending UNRWA health care centers (HCCs) for antenatal care and follow-up.

2-To know if attending health education sessions about anemia affects the knowledge and awareness of women by assessing the women with and without health education sessions about anemia in Gaza strip.

## Literature review studies

To conduct the study, the researcher has reviewed related studies and reports about anemia status among pregnant women attending UNRWA health care centers for antenatal care in Gaza strip.

## Nutritional survey conducted by UNRWA in (1961, 1978 and 1984)

Nutrition surveys conducted among the Palestine refugees in 1961, 1978 and 1984 revealed that more than 50 per cent of preschool children 0-3 years of age and women in reproductive age suffer from iron deficiency anemia.

## Nutritional survey conducted among pregnant women by WHO in (1990)

In 1990, a nutrition survey was conducted by the WHO Collaborating Center at Centers for Disease Control and Prevention (CDC), Atlanta in four Fields of UNRWA’s area of operations, namely Jordan, the Syrian Arab Republic (SAR), Gaza Strip and the West Bank. The survey revealed that the prevalence of iron deficiency anemia among pregnant women ranged between 31. 3% in the first trimester to 58. 9% in the third trimester Agency-wide, while the prevalence among children 6-36 months of age ranged between 57. 8% in the West Bank and 75. 3% in SAR. A new intervention strategy for iron supplementation was then introduced in 1991, which was amended in 1995 placing special emphasis on treatment.

## Nutritional survey conducted among infants , preschool children and pregnant women by WHO in (1998)

In October 1998, the WHO Collaborating Centre at CDC conducted a nutritional survey in Gaza Strip, the results of which revealed that iron-deficiency anemia was still high among high-risk groups, namely infants, preschool children and pregnant women.

## A study conducted among pregnant women by UNRWA in (1999)

In 1999, UNRWA conducted a study to assess the maternal health programme which revealed inter-alia that the prevalence of anemia among pregnant women was 44. 7% in Gaza, 35. 5% in the West Bank, 32. 1% in Jordan, 28. 6% in Lebanon and 27% in Syria. In addition, the study showed that the prevalence of anemia progressively increases during the course of pregnancy as well as with parity. Anemia below 9g/dl constituted 1. 4% of pregnant women. This suggests that in spite of the interventions that the Agency had, so far, undertaken, iron-deficiency anemia, still represents a major public health problem.

## A study conducted among pregnant women, nursing mothers and children 6-36 months by UNRWA during (2004)

During 2004, UNRWA conducted a follow-up study to assess the prevalence of anemia among pregnant women, nursing mothers and children 6-36 months of age in order to assess the impact of these strategies on the prevalence among pregnant women, nursing mothers and children.

The study revealed that the overall prevalence of anemia among pregnant women varied from 35. 7% in Gaza, to 29. 5% in the West Bank, to 25. 5% in Lebanon, to 22. 4% in Jordan and 16. 2% in Syria. Although, the overall prevalence of anemia among pregnant women in all Fields dropped since the last assessment in 1999, these rates are still considered to be high. The reason for this drop could be attributed to the prophylactic iron supplementation which is provided for all pregnant women upon registration. There is a progressive rise in the prevalence of anemia during the course of pregnancy, which confirms that iron intake during pregnancy, does not meet the increased physiological requirements.

## Another study conducted among children 6-36 months, pregnant women and nursing mothers by UNRWA in (2004)

Another study by UNRWA in 2004 on the prevalence of iron

deficiency anemia among children 6 to 36 months of age, pregnant women and nursing mothers, revealed that anemia in Gaza Strip was fairly high (54. 7% among children, 35. 7% among pregnant women and 45. 7% among nursing mothers. The corresponding rates in the West Bank were 34. 3% among children, 29. 5% among pregnant women and 23. 1% among nursing mothers). The high prevalence of anemia for many children may cause permanent negative effects on their physical and mental development. It is worth mentioning that the prevalence of anemia among infants 6 to 12 months of age reached 75% in Gaza(9).

## CHAPTER 2

## BACKGROUND

## Definition of anemia

Anemia is defined as a decrease in the number of red blood cells (RBCs) or in the total hemoglobin levels in the blood due to lack of sufficient iron (10, 11). more specifically , it means lack in the concentration of hemoglobin, red blood cell volume, or red blood cell (RBCs) number(12).

Normally hemoglobin carries oxygen from the lungs to the body tissues, anemia leads to hypoxia which means lack of oxygen in the blood . There are three main types of anemia which include :

1- Excessive blood loss such as bleeding

2-Excessive blood cell destruction

3-Insufficient red blood cell production within the human body (13).

## Signs and symptoms of anemia

The signs and symptoms of anemia can be related to the anemia itself, or other causes and the women may experience these symptoms differently :

In common cases, most women with anemia has a non-specific symptoms such as weakness, or fatigue, general malaise and sometimes poor concentration.

In addition, the signs may include abnormal pallor or lack color of the skin, and nail beds upon clinical examination is performed .

In severe cases of anemia, there may be signs of circulation disturbances such as tachycardia, and cardiac enlargement.

There may be signs of heart failure. and restless legs syndrome is more common in those with iron deficiency anemia (IDA) patients .

Swelling of both legs, arms, vomiting, chronic heartburn, and bloody stool may appear in rare cases(14).

mhtml: file://C: Documents%20and%20SettingsMARWANMy%20DocumentsAnemia%20-%20Wikipedia,%20the%20free%20encyclopedia. mht! http://upload. wikimedia. org/wikipedia/commons/thumb/9/91/Symptoms\_of\_anemia. png/260px-Symptoms\_of\_anemia. png

Main symptoms that may appear in anemia (14)

## Diagnosis of anemia

In general, In the first time of diagnosis of anemia a simple blood test is ordered by the physician called complete blood counts (CBC ) . Another blood tests can be ordered is examination of a stained blood smear (SBS) by a microscope which could be helpful in the diagnosis of anemia, and sometimes it will be necessary in some countries internationally where automated analysis is not easily accessible.

Usually and commonly four blood components are ordered and measured consists of hemoglobin concentration , RBC count, RDW and MCV, allowing others (hematocrit, MCH and MCHC) to be calculated, and to be compared to values according to age and sex. Some counters measurement estimate hematocrit level (Hct) from direct measurements in the same time (15).

## Table 2. 1 WHO’s Hemoglobin thresholds used to define anemia (1 g/Dl = 0. 6206 mmol/L)(15)

## Age or gender group

## Hb threshold (g/dl)

## Hb threshold (mmol/l)

Children (0. 5-5. 0 yrs)

11, 0

6, 8

Children (5-12 yrs)

11, 5

7, 1

Children (12-15 yrs)

12, 0

7, 4

Women, non-pregnant (> 15yrs)

12, 0

7, 4

Women, pregnant

11, 0

6, 8

Men (> 15yrs)

13, 0

8, 1

## Anemia during pregnancy

Anemia in pregnancy is defined as hemoglobin level less than (11g/dl ) or hematocrit level less than (33%) (16). It aggravates the effects of maternal blood loss and infections at childbirth, and is associated with increased maternal mortality and morbidity(17, 18). iron deficiency is usually considered as the most common cause of anemia in pregnancy (16).

Anemia occurs when the number of red blood cells are very low under the normal level . Red blood cells are very important blood component because they carry oxygen from lungs to all body organs. Without sufficient amount of oxygen, the body cannot work as well as it should.

Anemia can affect any individual, but women are at greater risk for this condition. In women, iron and red blood cells are lost when bleeding or hemorrhage occurs from very heavy or long periods (menstruation).

Anemia is common among pregnant women because a woman needs to have adequate red blood cells to carry oxygen to women body and to her baby. So it’s important for women to prevent anemia before, during and after pregnancy. Women will probably be tested for anemia regularly at least twice during pregnancy: during the first prenatal visit and then again between 24 and 28 weeks(19).

Anemia is a condition of less red blood cells, or a lack ability of the red blood cells to carry oxygen or iron in the blood. Tissue enzymes dependent on iron in the blood can affect cell function in the body mainly in muscles and nerves . then the fetus is dependent on the mother’s blood and anemia can cause problems before and after pregnancy such as preterm birth, poor fetal growth , and low birth weight(20).

## Main causes of anemia during pregnancy

## Iron deficiency anemia

Women often become anemic during pregnancy because the demand for iron and other vitamins is increased. The mother must increase her production of red blood cells and, in addition, the foetus and placenta need their own supply of iron, which can only be obtained from the mother. In order to have enough red blood cells for the foetus, the body starts to produce more red blood cells and plasma. It has been calculated that the blood volume increases approximately 50 per cent during the pregnancy, although the plasma amount is disproportionately greater. This causes a dilution of the blood, making the hemoglobin concentration fall. This is a normal process, with the hemoglobin concentration at its lowest between weeks 25 and 30. The pregnant woman may need additional iron supplementation, and a blood test called serum ferritin is the best way of monitoring this(21).

Illness or Disease

Some women may have an illness that causes anemia. Diseases such as sickle cell anemia or thalassemia affect the quality and number of red blood cells the body produces. If you have a disease that causes anemia, talk with your health provider about how to treat anemia(22).

## Types of anemia in pregnancy

There are several types of anemia that may occur during pregnancy:

## Iron deficiency anemia

This is the most common type of anemia during pregnancy. It is known as the lack of iron in the blood, which is essential to produce hemoglobin – the part of blood that carries oxygen from the lungs to tissues and many organs in the body. Good nutrition system to the women before becoming pregnant is very important to help build up these stores and prevent iron deficiency anemia during pregnancy period.

## Blood loss

Blood loss at delivery and after delivery (postpartum) can also cause anemia. The average blood loss with a vaginal birth is about 500 milliliters, and about 1, 000 milliliters with a cesarean delivery. Sufficient iron stores can help a woman replace lost red blood cells during delivery.

## Vitamin B12 deficiency

Vitamin B12 is essential in forming red blood cells (RBCs) and in protein synthesis. Women who eat no animal products (vegans) are commonly most likely to develop vitamin B12 deficiency. Including animal foods in the diet such as meats, milk, eggs, and poultry can prevent vitamin B12 deficiency. Very severe vegans usually need supplemental vitamin B12 which usually administered by injection during pregnancy.

## Folic acid deficiency

Folic acid, is a B-vitamin that works with iron to help with cell development and growth. Folic acid deficiency in pregnancy is most commonly associated with iron deficiency since both folic acid and iron are found in the same types of nutrition. Several Studies revealed that folic acid is necessary for women during pregnancy , this maybe because folic acid help reduce the risk of having congenital baby with certain birth defects of the brain and spinal cord if taken by the women before conception and in early pregnancy (20).

## Symptoms of anemia during pregnancy

Women with anemia during pregnancy may not have obvious symptoms unless the cell counts are very low. The following are the most common symptoms of anemia that may occur in pregnancy. However, each woman may experience symptoms differently. Symptoms may include:

pale skin, , nails, lips, palms of hands

labored breathing

underside of the eyelids

vertigo or dizziness

fatigue

rapid heartbeat (tachycardia)

The symptoms of anemia may similar other conditions or medical problems . So you should always consult your physician for a diagnosis and treatment(20).

## Diagnosing of anemia during pregnancy

Depending on clinical symptoms, anemia is usually discovered during antenatal screening specially in the first visit of pregnant women to the antenatal care clinics for antenatal care and follow up. Normally , Blood tests are usually measured on the first visit to antenatal health center, and again during pregnancy .

A description of Hemoglobin(Hbs) , red blood cells (RBCs) and their different components will be included in the blood test result.

## Possible complications of anemia and iron deficiency anemia during pregnancy

There are several possible complications may occur during pregnancy which threats women health such as:

Breathing difficulty, palpitations and angina. Severe anemia due to hemorrhage or loss of blood after the delivery. In this condition, the woman may be advised to have a blood transfusion as soon as possible (21). Severe anemia related to any reason may lead to hypoxemia and enhances the occurrence of coronary insufficiency and myocardial ischemia. (23).

In women with severe iron deficiency, disturbances in function of epithelial tissue is usually occurred . Atrophy of the lingual papillae in the tongue may occur and show a glossy appearance. Also , angular stomatitis may develop associated with fissures at the corners of the mouth. The occurrance of dysphagia may appear with hard diets. Atrophic gastritis occurs in cases of iron deficiency with progressive lack of stomach enzymes production such as loss of acid secretion, pepsin, and intrinsic factor and development of an antibody to gastric parietal cells.

Cold intolerance occurs in some cases with chronic iron

deficiency anemia and is characterized by neurologic pain , vasomotor disturbances, or tingling and numbness. In rare conditions, severe iron deficiency anemia is associated with increased intracranial pressure. These symptoms can be treated with iron therapy. Impaired immune function is shown in cases with iron deficiency. Moreover, there are reports revealed that those patients are at high risk to develop infection (23).

## Treatment for anemia in pregnancy

Specific treatment for anemia will be identified prescribed by physician based on:

Your pregnancy status

Overall health, and medical history

Extent of the disease

Your tolerance for specific medications, or procedures

Expectations for the course of the disease

Your opinion or preference

Treatment of anemia depends on the type and severity of anemia. In cases of iron deficiency anemia treatment includes iron supplements therapy. Some forms are time-released, while others must be taken several times every day. Having iron supplements with a citrus juice can be help with the absorption into the body. Taking antacids may decrease absorption of iron in the blood. There are side effects may occurs when taking Iron supplements such as nausea and stools become dark greenish or black in color. In addition , Constipation may also occur with iron supplements.

## Prevention of anemia in pregnancy

Anemia can be prevented during pregnancy with following a good pre-pregnancy nutrition system not only helps in preventing anemia, but also helps in building other nutritional stores in the mother’s body. Having a healthy and balanced diet with essential products of food during pregnancy helps maintain the iron levels and other necessary nutrients needed for the mother health and growing her baby(20).

## Women education

It is important for the public health officials in the geographical regions in which the iron deficiency is prevalent need to be more aware of the significance of iron deficiency, its effect on work performance and activities, and the importance of giving iron supplements during pregnancy and childhood. Moreover, Addition of iron to basic foodstuffs usually employed to solve this problem (24).

## CHAPTER 3

## Women health in Palestine

## Women’s Health

Palestinian women have a fundamental right to enjoy the highest possible levels of health and quality of life. MOH works towards the improvement of their health during all phases of lives with wide participation with other key health providers as UNRWA and NGOs.

## Indicators

## value

## Indicators

## value

% of women of child bearing age of total pop

22. 3

Prevalence of anemia among pregnant women in MOH

35. 7

Total fertility rate (5. 8 in GS and 4. 1 in WB)

4. 6

T. T. immunization coverage among newly pregnant women in MOH (99. 1 in UNRWA) (%)

42. 4

Maternal mortality ratio per 100, 000 live birth

15. 4

% of children received breastfeeding

95. 6

% of pregnant women attended antenatal care out of total live births

96. 5

Mean duration of breastfeeding (months)

10. 9

The number of visits paid per pregnant woman in MOH (7. 6 in UNRWA)

5. 5

Contraceptive prevalence rate (43 in GS, 55. 1 in WB)

50. 6

% of deliveries in health institution

97

% of IUDs used of total contraceptive methods

32

% of deliveries in home (0. 4 in GS, 5. 5 in WB)

3. 2

% of pills used of total contraceptive methods

38. 7

Prevalence of anemia among nursing mother in UNRWA

45. 7

## Antenatal care services

Antenatal care is an essential part of modern health care; such care is every woman’s right. Health providers must pay serious attention to the health of the pregnant woman and her fetus.

In Palestine there are four health sectors providing maternal care; the MOH, UNRWA, the NGOs and the private doctors. There are 353 MCH clinics in MOH and 53 clinics in UNRWA providing antenatal care.

The number of visits paid per pregnant woman was 5. 5 in Palestine (6. 5 in GS and 4. 8 in WB). In UNRWA, it was reported at 7. 6 visits per pregnant women in Gaza Strip, the percent of women who paid 7-9 visits was 47. 5%.

According to DHS in 2005, Data showed that 96. 5% of women aged 15-49 years received antenatal care in Palestine. There is direct relationship between education level and receipt of antenatal care; women who did not receive antenatal care were more likely to be less educated more than women who received antenatal care.

In addition, access to antenatal care decreased with parity, with fewer women accessing antenatal care for their 4th pregnancy or more.

## High risk pregnancy services

Certain conditions or characteristics, called risk factors, make a pregnancy high risk and woman or baby is more likely to become ill or die than usual. Doctors identify these factors and use a scoring system to determine the degree of risk for a particular woman. Identifying high-risk pregnancies ensures that women who most need special medical care.

The high-risk program has been implemented in 26 referral governmental clinics in the Gaza Strip and 18 MCH clinics in UNRWA.

The percentage of newly pregnant women visits with high-risk pregnancy was 14% of total newly pregnant women in MOH (17. 8% in the GS and 11. 6% in the WB). The number of visits paid per high-risk pregnant women was 5. 2 visits.

In UNRWA, the percentage of newly pregnant women visit at high risk and alert pregnancy was 44% from total antenatal visits of newly pregnant women. Out of the total, 40% paid 3-4 visits and 47. 7% paid 7-9 visits.

During home visit program in Gaza Strip, the factors associated with high risk pregnancy were as shown in the following table; taking in consideration that one woman may have more than one complication:

## Table 3. 1 factors associated with high risk pregnancy

Factors

Percent %

Anemia

48. 8

Multipara

27. 5

Primapara

25. 4

Previous CS

21. 6

Hypertention

16

Diabetes

5. 5

Pre-eclamptic

2. 1

Others

6

## Tetanus toxoid immunization

The vaccination for pregnant women is taken based on MOH protocol during the first antenatal visit. Immunization coverage among newly pregnant women was 42. 4% (25. 2% in WB and 64. 1% in Gs). In UNRWA, out of total (11, 100) pregnant women of 20 weeks and over of gestation, the vaccinated pregnant women were 11, 005 with a coverage rate of 99. 1% (25) .

## Anemia among women in Palestine

WHO define anemia as Hb is less than 11 gm/dl. The percentage of anemic mothers whom visited the governmental MCH for antenatal care was 38. 5% (27. 2%in the GS and 50% in the WB) . During study conducted in UNRWA in the year 2005, the prevalence rate of anemia among pregnant women was 35. 7% and 45. 7% among nursing mothers visited UNRWA-PHC centers for antenatal services in the Gaza Strip. During home visits program which are conducted by Women’s Health and development Directorate in MOH, Hemoglobin (HB) has been examined for 1, 950 visited mothers after delivery in Shifa as 38. 5% (27. 2%in the GS and 50% in the WB). During home visits program which are conducted by Women’s Health and development Directorate in MOH, Hemoglobin (HB) has been examined for 1, 950 visited mothers after delivery in Shifa hospital especially those at high-risk pregnancy or who has complication/s during delivery. The results indicated that 61. 6% of women were anemic. Out of the total women, HB was diagnosed <8 gm/dl among 0. 8% of women, 8-10 gm/dl among 16. 7% of women, > 10 gm/dl – <11 gm/dl among 44. 1% of women, and > 11 gm/dl among 38. 4% of visited women. Ferrous sulfate and folic acid as a tonic is distributed for pregnant women and children under 3 years in MOH and UNRWA centers free of charge (25) .

## Table 3. 2 Prevalence rate of anemia among women visited UNRWA-PHC

## centers in Gaza Strip, 2005

Pregnant women

Nursing mothers

Samples

HB‹11gm/dl

## %

Samples

HB‹12gm/dl

920

328

35. 7

810

370

## CHAPTER 4

## METHODOLOGY

## Study design

A cross-sectional study design was conducted during August, 2009 in order to assess awareness among pregnant women attending UNRWA health care centers for antenatal care , based on health clinics of UNRWA in Gaza strip.

## Target population

All pregnant women who was registered at UNRWA clinics , both old and new , who attended for antenatal care during August, 2009 in Gaza strip .

## Sample size

A total of 164 women from UNRWA clinics in the middle region of Gaza strip were selected randomly to participate in the survey taking into account the distribution of population in each area to represent the study population fairly. The sample size was calculated by assuming a 95% confidence interval and sampling error no more than (5%) using Yamane formula (1967: 886) as follows:

Where n is the sample size

N is the population

e is the sampling error rate (5%)

## Instrument of the study

The instrument used in this study was questionnaire which created to cover the objectives of the study . the questionnaire included four divisions .

1st division: The question is about socio-demographical data of the women including age, educational level, occupation, number of children, economical status and attending health education session . the questions in this division were closed-ended and open-ended.

2nd division: The questions is about knowledge and awareness of women regarding anemia concept , nutrition , iron supplements , and the tea with meals. The questions included 3 choices (completely agree, partially agree and disagree).

3rd division: The questions about opinions and attitudes of women regarding anemia . It included 3 choices (completely agree, partially agree and disagree).

4th division: The questions about health education session regarding anemia. It included 3 choices (completely agree, partially agree and disagree).

## Data collection

Data was collected using the structured questionnaire as a tool to collect data from the samples of study by individual interview performed by the researcher and with assistant of staff in UNRWA clinics who has the experience in data collection and methodology.

## data analysis

After data collection , the questionnaires were collected and the data was entered to computer software for processing and analysis. the programme used for analysis is (SPSS) statistical package for social sciences software version 15.

## Ethical consideration

Clearance and permission was obtained from Chief Field Health Section of UNRWA in Gaza strip in order to conduct questionnaires survey among refugees pregnant women who attended UNRWA clinics for antenatal care and follow-up in Gaza strip.

In addition, the permission was taken from the head of UNRWA clinics and also oral permission was obtained from the women who participated in the survey.

## CHAPTER 5

## RESULTS

The current study aimed to assess the awareness of anemia among pregnant women who attended UNRWA clinics for antenatal care.

## Table 6. 1 Age distribution of pregnant women

## Percent

## Frequency

## Age groups (years)

8. 5 %

14

Less than 20

34. 8 %

57

20 -25

25 %

41

26-30

31. 7 %

52

More than 30

100 %

164

Total

Table 1. 6 shows that most (34. 8%) of parti