# Consequences and prevalence of iron deficiency anemia in adult women of Sultanpur district

Kiran Agrahari and Arti Yadav

Anemia is a decrease in the total amount of red blood cells (RBCs) or hemoglobin in the blood, or a lowered ability of the blood to carry oxygen. When anemia comes on slowly, the symptoms are often vague and may include feeling tired, weakness, shortness of breath or a poor ability to exercise. Anemia that comes on quickly often has greater symptoms, which may include confusion, feeling like one is going to pass out, loss of consciousness, or increased thirst. Anemia must be significant before a person becomes noticeably pale. Additional symptoms may occur depending on the underlying cause. Anemia is a condition characterized by a reduction in the total circulating haemoglobin. There are different types of anemia, which are classified according to the causes of the anemia: a default in the production of red blood cells may be attributable to an iron, vitamin B12 or folate deficiency. Excessive destruction of red blood cells because of chronic diseases of nutritional, infective, metabolic or genetic origin leads to anaemia. Iron deficiency anaemia (IDA) is the commonest type of anemia. Among women, IDA is common during childbearing years and particularly during pregnancy due increased demand of iron and folic acid. This leads to maternal and infant morbidity and mortality. IDA causes pallor, weakness and tiredness. This disorder has a negative impact on immune status and physical work capacity. It can impair cognitive performance in all individuals. The main risk factors of IDA are: inadequate iron intake (due to an iron-deficient diet or in adequate absorption), increased iron requirements and blood loss. Indeed, the daily diet must include sufficient amounts of high bio available iron. This study was performed to determine the consequences and prevalence of iron deficiency anemia in adults women in Sultanpur city. The research survey method was used for the collection of data. Result showed that maximum 65 per cent of respondents were know about anemia while minimum 35 per cent respondents were not know about anemia.

**Key Words :** Anemia, Morbidity, Childbearing, Mortality, Consequences

## INTRODUCTION

Anemia is the most common blood disorder, affecting about a third of the global population. Iron deficiency

**MEMBERS OF RESEARCH FORUM**

**Author for correspondence :**
**Arti Yadav,** Kamla Nehru Institute of Physical and Social Sciences, **Sultanpur (U.P.) India**
(Email : artiyaduvanshi1996@gmail.com)

Associate Authors' :
**Kiran Agrahari,** Kamla Nehru Institute of Physical and Social Sciences, **Sultanpur (U.P.) India**

anemia affects nearly 1 billion people. In 2013, anemia due to iron deficiency resulted in about 183,000 deaths – down from 213,000 deaths in 1990. It is more common in women than men, during pregnancy and in children and the elderly. Anemia increases costs of medical care and lowers a person's productivity through a decreased ability to work. The name is derived from Ancient Greek: αναιμια anaimia, meaning "lack of blood", from αν- *an-,* "not" and αἷμα *haima,* "blood". Anemia is one of the most frequently observed nutritional deficiency

diseases in the world today. It is especially prevalent in developing countries, that too among women of child bearing age, adolescents, pregnant and lactating mothers. The immune status and morbidity from infections is affected by anaemia, of all the age groups.

**Objectives:**
– To study the nutritional assessment of the women.
– To find out the consequences of anemia in women.

# METHODOLOGY

Scientific methodology is necessary for a successful study as it directly indicates words the authenticity of the research and attempt has been made to provide to detail of methods and techniques devices and procedure applied for conducting the research. A present study on consequences and prevalence of iron deficiency anemia in adult women of Sultanpur city.

**Research design:**
*Selection of location*:
The location of study was Sultanpur district (Bardhaiyabeer, Vinobapori, district hospital, Karurashy hospital Dr. Reboal).

*Sample size*:
Sample size consisted of 100 adult women of Sultanpur city.

*Questionnaire preparation*:
A self prepared questionnaire was used for collecting the relevant information regarding the study and random sampling was used.

*Statistical analysis*:
The collection of data were analyzed with the help of the following way.
Percentage % = n/N*100
n = Number of respondents
N= Total number of observation.

**Methods of enquiry and collection of data:**
Survey methods were adopted in order to collect the data from the selected respondents with the help of developed questionnaire schedule. The schedule included aspects which led to the fulfillment of the objectives of this study.

The schedule included the following information:
– General information
– Nutritional status through anthropometric measurement
– Dietary information.

**General profile :**
Data regarding general profile of respondents were collected using the first part of the schedule .This section covered the aspects including respondents name, age and sex, religion, status, types of family, income, educational level and all these are important for knowing the respondents socio-economic status. The age of each respondents was ascertained with the help of their date of birth.

**Dietary survey:**
A dietary survey was conducted as described by Srilakshmi (2005). The foods consumption frequency was recorded in terms of cereals, pulses, milk and milk products, green leafy vegetables, roots and tubers, fruits, meats and poultry, fats and oils and sugar. Diet surveys constitute an essential part of any complete study of nutritional status of individuals or groups, providing essential information on nutrient intake levels, sources of nutrients, food habits and attitudes.The nutrient intake of the subjects was calculated for calories, protein, fat, calcium, iron, vitamin A, vitamin C and thiamine. The nutrient intake was calculated using the food composition tables by Gibson (2005) and compared with the ICMR standard values. Eating habits and dietary pattern of the respondents were recorded.

**Anthropometric measurement:**
Anthropometric measurement of various physical dimensions. Hence, anthropometric measurements are useful criteria for assessing nutritional status.The anthropometric measurements included height (cm) and weight (kg) which were recorded using the procedure prescribed by Gibson (1990).

**Height measurement :**
Height (cm) of the subjects was the helps of a measuring tape by sticking it on the wall .The subjects were made to stand erect, looking straight, buttocks, shoulder and head touching the wall, heels together, toes, apart and hand hanging loosely by the sides, height (cm)

was recorded in centimeters.

## Weight :

The personal weighing machine of maximum capacity of 120 kg and the minimum division of 0.5 kg was used to weight all the subjects and scale was sat to zero. The respondents were made to stand erect on the weighting scale without foot wear, not leaning against to zero after each measurement.

## Clinical signs and symptoms :

The general appearance, body appearance, growth, skin, hair, nail, eyes, and appetite of each subject were examined. In order to find out sign of nutritional deficiencies were present. Observation were recorded on the schedule.

## OBSERVATIONS AND ASSESSMENT

The data collection of the different aspect per plan was tabulated and analyzed statistically .The result from the analysis are presented and discussed in the following sequence.

This Table 1 shows that maximum 65 per cent of respondents were have knowledge about anemia while minimum 35 per cent respondents were not have knowledge about anemia.

Mehta (2009) reported about prevalence of anemia in world, 1.1 to 2.0 billion people suffer from anemia, from this, 70 per cent of women contributed to anemia prevalence in the world 45 per cent -50 per cent of pregnant women of all over world suffer from anemia. In India 1.5 coror women are suffering from anemia. Every year 50 lakh women death occur due to anemia. 82 per cent of 6-20 year of school and college girls are suffering from anemia. 93 per cent of women and girls are suffering from anemia from lower income group in India.

This Table 2 shows that maximum 82 per cent of respondents were consume green leafy vegetables every day while minimum 18 per cent respondents were not consume green leafy vegetables every day.

This Table 3 shows that maximum 89 per cent of respondents were consume pulses everyday while minimum 11 per cent of respondents were not consume

**Table 1: Distribution of respondents on the basis of knowledge about anemia**

| Know about anemia | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Yes | 65 | 65 |
| No | 35 | 35 |
| Total | 100 | 100 |

**Table 2 : Distribution of respondents on the basis of daily consumption of vegetable**

| Consume green vegetables leafy | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Yes | 82 | 82 |
| No | 18 | 18 |
| Total | 100 | 100 |

**Table 3: Distribution of respondents on the basis of daily consumption of pulses**

| Consume pulses every day | Frequency (n=100) | Percentage % |
|---|---|---|
| Yes | 89 | 89 |
| No | 11 | 11 |
| Total | 100 | 100 |

**Table 4: Distribution of respondents on the basis of their hemoglobin level**

| Hemoglobin level | Frequency (n=100) | Percentage % |
|---|---|---|
| Normal | 35 | 35 |
| Below than normal | 65 | 65 |
| Total | 100 | 100 |

pulses every day.

This Table 4 shows that maximum 65 per cent of respondents were had low hemoglobin level while 35 per cent of respondents were had normal hemoglobin level.

The Table 5 shows that maximum 45 per cent of respondents were had good general appearance while

23 per cent of respondents were had poor physical appearance.

The Table 6 shows that maximum 60 per cent of respondents were had normal colour of nails while minimum 20 per cent of respondents were had Pale and spoon shaped nails.

**Table 5 : Distribution of respondents on the basis of their general appearance**

| General appearance | Frequency (n=100) | Percentage % |
|---|---|---|
| Very good | 17 | 17 |
| Good | 45 | 45 |
| Fair | 15 | 15 |
| Poor | 23 | 23 |
| Total | 100 | 100 |

**Table 6 : Distribution of respondents on the basis of their nails colour**

| Nail colour | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Normal | 60 | 60 |
| Pale | 20 | 20 |
| Spoon shaped | 20 | 20 |
| Total | 100 | 100 |

**Table 7 : Distribution of respondents on the basis of their skin colour**

| Skin colour | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Normal | 65 | 65 |
| Pale | 35 | 35 |
| Total | 100 | 100 |

**Table 8 : Distribution of respondents on the basis of their appetite**

| Appetite | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Normal | 87 | 87 |
| Anorexic | 13 | 13 |
| Total | 100 | 100 |

**Table 9: Distribution of respondents on the basis of their weakness**

| Weakness | Frequency (n=100) | Percentage (%) |
|---|---|---|
| Yes | 21 | 21 |
| No | 79 | 79 |
| Total | 100 | 100 |

**Table 10 : Distribution of respondents on the basis of their hair**

| Hair | Frequently (n=100) | Percentage (%) |
|---|---|---|
| Yes | 88 | 82 |
| No | 12 | 12 |
| Total | 100 | 100 |

Mehnaz *et al*. (2006) reported the of iron deficiency anemia (98.87%), was found to be in urban area of Aligarh. The level of anemia was categorized as 14.8 per cent with mild, 72 per cent with moderate and 13 per cent with severity.

Table 7 shows that maximum 65 per cent of respondents were had normal skin colour while 35 per cent of respondents were had pale skin colour.

The Table 8 shows that maximum 87 per cent of respondents were had normal appetite while minimum 13 per cent of respondents were anorexic.

This Table 9 shows that maximum 79 per cent of respondents were not weak while minimum 21 per cent of respondents were weak.

This Table 10 shows that maximum 88 per cent of respondents were had normal hair while minimum 12 per cent of respondents were had rough hair.

## LITERATURE CITED

**Gibson, R.S. (1990).** *Principles of nutritional assessment.* New York, USA, Oxford University Press.

**Gibson, R. S. (2005).** *Principles of nutritional assessment.* 2nd Ed. Oxford University Press.

**Mehnaz, S., Afzal, S., Khalil, S. and Khan, Z. (2006).** Impact of iron folate and vitamin C supplementation on the prevalence of iron deficiency Anemia in non pregnant females of Peri Urban areas Aligarh. *Indian J. Community Medicine,* **31** (3) : 201-203.

**Mehta, Mukund (2009).** *Prevalence of anemia in women, fitness-Ravipurti*, dated 15-11-2009 Gujarat Samachar.

**Srilakshmi, B. (2005).** *Dietetics,* Revised 5th Ed., New Age International (P.) Ltd, Publishers, Delhi, India.

■**WEBLIOGRAPHY**

*https://en.m.wikipedia.org ›wiki Anemia.*