

## **To study the health status of adolescents girls suffering from the problem of anemia**

**RUHI GREWAL**

Guest Faculty

Department of Home Science, D.A.V. College For Girls  
Yamuna Nagar (Haryana) India

### **ABSTRACT**

Anemia is a global health problem and 40% of world population suffers from the problem of anemia and adolescents especially girls are most vulnerable towards the problem of anemia. The present study was conducted on college going adolescent girls so as to study their anemic problem. A sample of 50 girls was selected on the random basis from DAV College for Girls, Yamuna Nagar. Their recent Hb levels were taken by referring to their blood reports and anemia was defined as per WHO cut-offs. Results of the study showed that 92% of girls suffered from the problem of anemia. 40%, 46%, and 0.5% of them suffered from mild, moderate, severe anemia. It was observed that most of the adolescent girls suffered from anemic symptoms due to high prevalence of anemia. 54% of girls had the problem of headache, 48% of them had the weakness sign followed by 46% of fatigue symptom, 14% of them had symptom of paleness and shortness of breath whereas least % of girls had palpitation problem *i.e.* 4% and none of the girl suffer from koilonychia problem. Hence, this study shows that though anemia is highly prevalent among adolescent girls but it not that severe. Mild, moderate anemia needs to be well controlled and proper monitoring should be done for effective nutritional supplements by Government as well as family members so as to control anemia and its symptoms.

**Key Words :** Anemia, Health status, Adolescent girls

### **INTRODUCTION**

Anemia is a condition in which the number of red blood cells and consequently their oxygen-carrying capacity is insufficient to meet all the body's physiologic needs which vary with a person's age, gender, altitude, smoking and different stages of pregnancy (Pareek and Hafiz, 2015). Iron deficiency is thought to be the most common cause of anemia globally, but some other nutritional deficiencies (including folate, vitamin B12 and vitamin A), acute and chronic inflammation, parasitic infections, and inherited or acquired disorders can cause anemia (WHO, 2007).

It is a global public health problem. It has caused human death and social as well as economic problems both in developed and developing countries. According to WHO it has

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affected almost 24.8% of world population.( Chathuranga *et al.*, 2014) And about India, anemia is widely prevalent in this developing country which affect the both the sexes and all age groups. Among adolescents, girls constitute a vulnerable section of society especially in country like India. In a family with limited resources female child is more neglected. The added burden of mensurational loss leads to the crisis too often (Siddharam *et al.*, 2011).

The adolescent girl still remains a young planet that neither gets light or water, she remains flower that could have blossomed but could not. The word adolescents derived from latin word means to “grow” or “mature” ( Somashekhar, 2011). WHO has defined adolescent stage as life spanning the ages between 10-19 yrs. It is formative period where a maximum physical, psychological and behavioral change takes place (Sinha and Karki, 2012).

Anemia is a common hematological problem which leads to reduction in oxygen carrying capacity or reduction in red cell mass. It has health and welfare and social and economical consequences like cognitive development, reduction on physical work, increased risk of morbidity and mortality and reduction in growth.

WHO has classified anemia into three categories: mild (11.0-11.9g/dl), moderate( 8.0-10.9g/dl) and severe (<8g/dl) anemia (Rati and Jawadagi, 2014).

According to WHO, highest no. of individuals affected by anemia are non pregnant women aged 15-49.9 yrs. And most anemic cases are due to nutritional deficiencies (WHO, 1993-2005). A recent report from UNICEF says that more than half of population of adolescent girls in India is anemic and its proportion is higher than the least developed countries like Sub Saharan Africa.

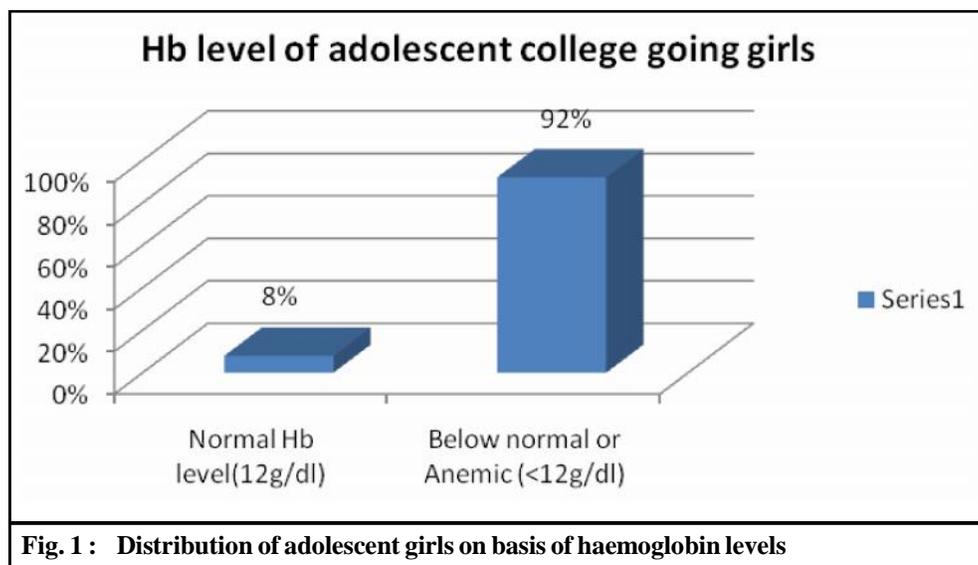
## METHODOLOGY

This study was planned to determine the health status of adolescent girls suffering from anemia. Survey method was conducted for the present study. Simple Random Sampling method was used. This study was conducted in DAV College for girls Yamunanagar, Haryana and the sample selected consists of college going adolescent girls of undergraduate classes. The size of sample was 50. For present study, questionnaire method was selected which consists of simple, unambiguous, easy to answer questions and information related to anemic problems of adolescent girls was collected with the help of this method. While formulating questionnaire following points were kept in mind like Hb levels, signs or symptoms due to anemia. Girls actively participated in this study by providing accurate information and accurate Hb levels were considered by checking their recent blood reports. Hb levels helped in determining following points: age, diet, and general appearance, nature of bleeding and duration of bleeding, results of Hb level.

## RESULTS AND DISCUSSION

After the data collection, the results of following parameters were collected which shows that:

A sample of 50 adolescent college going girls were taken for the present study, Hemoglobin levels of these girls were taken and Fig. 1 shows that 8% of adolescent girls Hb level fall in the normal category *i.e.* (12-15 g/dl) whereas 92% of adolescent girls Hb level



falls in anemic category or below normal level which is below 12g/dl.

Singh *et al.* (2015) conducted study on prevalence of anemia among adolescent girls of Shimla Hills and results of study showed that 55.34% of girls were found to be anemic whose Hb levels were below 12g/dl. From the literature researches, prevalence of anemia in India was found to be between 46% to 88%. So this study concludes that prevalence of girls suffering from anemia is high.

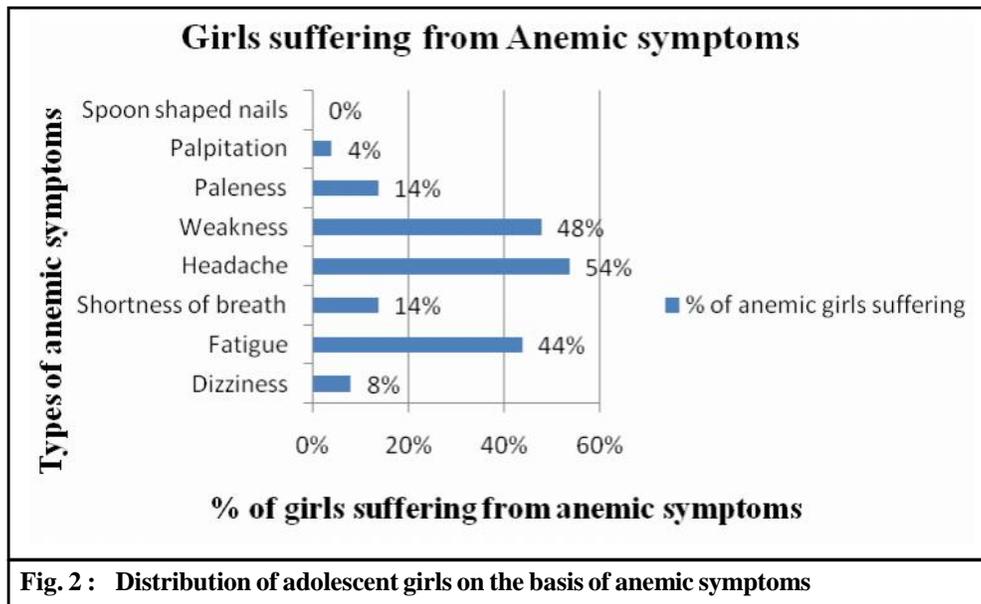
In this present study, adolescent girls were distributed on the basis of anemic categories *i.e.* mild, moderate, severe anemia. Table 1 shows that 40% of girls are suffering from mild anemia *i.e.* their hb level falls in the range of 11.0-11.9g/dl. 46% of girls suffer from moderate anemia *i.e.* their hb level fall in the range of 8.0-10.9g/dl whereas 6% of adolescent girls suffer from severe anemia means there Hb level is below 8g/dl.

Table 1 : Distribution of adolescent girls according to anemic categories			
Anemia categories	Values	No. of girls suffering from anemia	% of girls suffering from anemia
Mild anemia	11.0-11.9 g/dl	20	40%
Moderate anemia	8.0-10.9 g/dl	23	46%
Severe anemia	<8g/dl	3	6%

Srinivas and Mankeshwar (2015) conducted study on the prevalence and nutritional determinants of anemia in urban area among unmarried adolescent girls and results showed that overall prevalence of anemia was 78.4% where as prevalence of mild, moderate and severe anemia was 64.2%, 36.2%, 0.6%. Hence this study concluded the highest prevalence of anemia among adolescent girls.

Fig. 2 reveals about adolescent girls suffering from anemic symptoms. 54% of adolescent girls suffer from symptom of headache, whereas 48% of girls suffer from the problem of weakness due to lack of iron levels followed by 14% of girls suffering from the

problem of shortness of breath and paleness and none of the girls suffer from the problem of spoon shaped nails *i.e.* koilonychia problem.



**Summary and conclusions:**

The study was conducted to determine the health status of girls suffering from anemia and it was conducted among 50 adolescent girls in DAV College for girls, Yamuna Nagar. Hb levels of these girls were checked and it was observed that 92% of adolescent girls were anemic *i.e.* their hb levels were below the normal value *i.e.* 12g/dl where as only 8% of them had normal Hb level. Girls were distributed on the basis of anemic categories and it was observed that 46% of girls suffer from moderate anemia *i.e.* their hb level falls in the range of 10.0-11.9g/dl. Due to high prevalence of anemia, no. of girls had the anemic symptoms, it was seen that 54% of anemic girls suffered from the problem of headache followed by 48% of girls suffering from weakness symptom followed by 44% of fatigue sign. 14% of girls had the problem of paleness and shortness of breath. And it had also been observed that least per cent of girls had the problem of palpitation *i.e.* 4% and none of them had any sign of koilonychia *i.e.* spoon shaped nails. Hence this study concludes by saying that though prevalence of anemia among adolescent girls is very high but it has not the critical stage, so it can be well controlled with the help of adequate and proper nutritional management. A good nutritional diet, iron and folic acid supplements will help in overcoming the problem of anemia.

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