

## A Comparative study of Anemia in Adolescent Boys and Girls of Bahraich District

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### Abstract

The aim of the present study was to compare the anemia of adolescent boys and girls of Bahraich District. Prevalence of anemia was found significant among adolescents by several researchers. For this purpose the population was taken of mix nature i.e. urban & rural both. A sample of 95 anemic adolescents (51 girls and 44 boys) were selected through purposive sample technique. Hb concentration was estimated by cyanmethemoglobin method. For comparing the anemia with sex mean, standard deviation and critical ratio were calculated. The obtained value of t-test was only 0.683. This value was not found significant neither at .01, nor at .05 levels of significance. Hence, it was concluded that there is no difference in the anemia of boys and girls. It was also concluded that sex was not found related to anemia among adolescents.

### INTRODUCTION

Anemia is an important health problem throughout the world. The number of blood cells varies among adolescents by the variation of age, sex, attitude and food habits. Adolescent is the age of rapid growth and development and by this reason they are more likely to suffer from this disease. In this transition period the prevalence of anemia among adolescents in developing countries is 27% (Duggal, 2001). Prevalence of anemia was also found significant among adolescents by Goel and Gupta (2007), Zaveleta et al. (2000) and Fujimari et al. (1964). In a study Yousuff H. et al. (2012) studied that 60% of schooling adolescents suffer from different degrees of anemia based on hemoglobin concentration in Malaysia. Anmol Gupta (2012) revealed that prevalence of anemia was found 21.4% in the girls of Shimla Hills. Thomson (2011) and Dimeglio (2000) revealed in their studies that age, BMI, sex, weight and smoking were associated with anemia. Most of the studies have been conducted on adolescent girls and pregnant women, while adolescent boys have not been touched. This researcher thinks that adolescent boys are also more likely to suffer from anemia due to change in life style. So, this

study was conducted to compare the anemia of adolescent boys and girls of Bahraich District.

### Methods

For the purpose of this study population was mixed i.e. urban and rural adolescents of Bahraich district. The sample was selected by purposive random sampling technique. 75 Girls and 75 Boys were selected having symptoms and signs of anemia aged 12 to 19 years. Thus, initially a total sample was of 150 adolescents.

### Measurement of Haemoglobin

Hemoglobin concentration was estimated by cyanmethemoglobin method. From each subject of the sample blood was taken and slides were prepared. These slides were examined by Bawa Pathology Bahraich. Out of 150 subjects only 51 girls and 44 boys were found anemic.

### Analysis of Data

The data of hemoglobin obtained from the pathology was organized and two distributions were prepared separately for boys and girls. The criteria of anemia was accepted as Hb value below 12 mg/dl. Mean and S.D. of the data were calculated for both the distributions. Statistical analysis of the results according to sex was determined by using t-test. These values for boys and girls are given in the following table.

**Table**  
**Mean, S.D. and Critical Ratio of Hb concentration of adolescents.**

Sex	Number	Mean	SD	C.R.	Significance
Boys	44	8.79	$\pm 2.21$	0.683	NS*
Girls	51	9.09	$\pm 2.04$		

NS=Not Significant.

Above table indicates that the mean and S.D. of Hb concentration for boys and girls were 8.79,  $\pm 2.21$  and 9.09,  $\pm 2.04$ , respectively. These values also reveals that the mean of Hb concentration for girls was higher as compared to boys. The value of t-test is only 0.683. This value was not found significant. In this way, it may be said that on Hb concentration boys and girls are similar. Both boys and girls were found anemic. The results as found in this study may be compared with other studies. A low prevalence of anemia among school-age adolescents (25%) was reported by Zavelata et. al. (2000). Fujimari E. (1964)

reported that 29% adolescent girls were anemic. Goel S. (2012) observed a prevalence of 21.5% in Shimla city.

#### **Conclusion**

The prevalence of Anemia among adolescents aged 12 to 19 years was found in both the sexes. The most probable cause of which is nutritional iron deficiency. So, it is suggested that haemoglobin level should be checked time to time. It should be included in school curriculum and nutrition education should also be given in these institutions.

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