

PREVALENCE OF ANAEMIA AMONG THE ADOLESCENT OF PRATAPGARH DISTRICT

Shipra Srivastava¹ & Neeru Bala²

*¹Research Scholar, Department of Food Nutrition and Public Health, Ethelind College of Home Science,
Sam Higginbottom Institute of Agriculture, Technology and Sciences, Uttar Pradesh, India*

*²Associate Professor, Department of Food Nutrition and Public Health, Ethelind College of Home Science,
Sam Higginbottom Institute of Agriculture, Technology and Sciences, Uttar Pradesh, India*

Received: 09 May 2018

Accepted: 14 May 2018

Published: 19 May 2018

ABSTRACT

Anemia is the major public health dilemma among adolescent in developing countries. The aim objective of the study to assess the prevalence of anemia among the adolescents in Pratapgarh district. A total of 380 respondents aged from 10-19 years were selected for the study. An equal number (190) of boys and girls were selected randomly from Saket Degree College and Krishna Prasad Hindu college. A pretested questionnaire was used to collect the data. Hemoglobin of the respondents was measured by the Cyanmethaemoglobin method. The results show that 41 percent of adolescents were anemic out of which 30 percent and 22.6 percent were mild anemic whereas only 18.4 percent and 11.6 percent were moderately anemic. Thus, nutrition education should be given to parents and adolescent.

KEYWORDS: *Anemia, Health Dilemma, Haemoglobin*

INTRODUCTION

Anemia is a major public health problem in India. Adolescent children are one of the major risk groups for anemia. It is commonly defined as the time between the onset of puberty and adulthood. This maturation process involves both physical growth and emotional maturation. During adolescence, young people are in a transition period when they gradually take over the responsibility for their own eating habits. Adolescents need more calories during this period than they will ever need again in their lives. The prevalence of anemia among adolescents is 27% in developing countries, and 6% in developed countries. Accelerated development, hormonal changes, malnutrition, and start of menstrual periods in girls are major causes in this period. Because iron is an essential element for the function of various organs, its deficiency may lead to impaired perception and learning difficulties ending up with declining school success. Therefore, it was planned to assess the prevalence of anemia among the adolescents in pratapgarh district.

MATERIALS AND METHOD

The research involved, the adolescent's representing the whole district and efforts were made to locate the respondents of varied socioeconomic background. A total 380 respondent was selected (aged from 10 to 19) for the study. It includes 190 boys and 190 girls which were randomly selected from the Saket Degree College and Krishna Prasad Hindu College. Questionnaire-based method was implemented for data collection. The general profile covers the aspects

including respondent's name, age, and gender, family income, educational status, and occupation. Ethical approval (reg. no.: IEC/SHIATS/2014/A/36) was taken from the Department of Health Sciences, Shalom Institute of Health and Allied Sciences SHUATS, Allahabad for all the clinical trials included in this study. The hemoglobin estimation, test which was measured by the Cyanmethaemoglobin method in the registered pathology. The samples were tested for hemoglobin estimation, test in Padam Pathology situated on Raja Pratap Bahadur Park, near government hospital, Pratapgarh. Based on the Hb levels of the adolescent girls, they were categorized as non-anemics or anemics as per classification shown in Table 1. The nutritional data, thus, obtained from the survey of Adolescents of Pratapgarh district were formatted and presented in tabular and graphical forms in MS EXCEL package. The data were statistically analyzed using an appropriate statistical technique.

Table 1: Hemoglobin Level (g/dl) Indicative of Anemia

Respondents	Normal	Mild- anemic	Modertae- anemic	Severe- anemic
Adolescent Girls	≤ 12	11-11.9	8-10.9	<8.0
Adolescent Boys	≥13	11.0-12.9	8.0-10.9	<8.0

Reference: ICMR (2011)

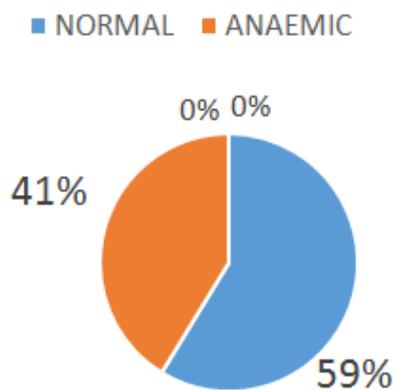


Figure 1: Prevalence of Anemia

Table 2: The Distribution of Respondent on the Basis Anemia and its Severity

Respondents	Non-Anemic		Anemic					
	Normal		Mild		Moderate		Severe	
	N	per cent	N	per cent	N	per cent	N	per cent
Girls	98	51.6	57	30	35	18.4	-	-
Boys	125	65.8	43	22.6	22	11.6	-	-

Table 2 shows the distribution of respondent on the basis anemia and its severity. Most of adolescent boys and girls were non anemic (51.6 percent and 65.8 percent respectively) whereas 48.4 percent and 34.2 percent of adolescent girls and boys were anemic. Most of the adolescent girls (30 percent) were mild anemic and 18.4 percent were moderately anemic. Among adolescent boys, most of them (22.6 percent) were mild anemic and 11.6 percent were moderately anemic. This may be attributed to the fact that consumption of green leafy vegetables and fruits were lower among the adolescents. According to **Parikh et al., (2016)** about 70 percent adolescent boys were anemic (< 13 gm/dL) and 71.43 percent adolescent girls were anaemic and overall prevalence anemia among adolescent was 70.50 per cent. **Chaudhary**

and Dhage (2008) reported that out of 104 subjects (adolescent females), 72 subjects (69.2per cent) had mild anemia [Hb 10 to < 12 gm per cent] while 32 subjects (30.8per cent) had moderate anemia [Hb 7 to < 10 gm per cent]. None of the subjects had severe anemia. According to Melkam *et al.*, (2015) the overall prevalence of anemia among school adolescents was 15.2per cent, of which 83.9per cent comprised mild anemia. The proportion of microcytic, hypochromic anemia was 53per cent.

Table 3: Observed Mean Value of Haemoglobin

	Girls		Boys	
	Range (gm/dl)	Observed Mean Values	Range (gm/dl)	Observed Mean Values
Normal	>12	12.9	>13	14.1
Mild	11.0-11.9	11.3	11.0-12.9	11.5
Moderate	8.0-10.9	9.8	8.0-10.9	10.1
Severe	<8.0	-	<8.0	-

The table 3 shows the observed mean value of hemoglobin. The mean observed value of hemoglobin of normal, mild and moderate was 12.9 g/dl, 11.3 g/dl, and 9.8 g/dl respectively. Among the adolescent boys, the mean observed value of hemoglobin of normal, mild and moderate was 14.1 g/dl, 11.5 g/dl, 10.1 g/dl respectively. According to Goyal *et al.*, (2015) the prevalence of anemia was 43.11 percent and 55.04 percent among rural and urban school girls respectively. Mean hemoglobin concentration of study subjects was 11.35g/dl. Prevalence of mild, moderate and severe anemia among study populations was 34.53 percent, 10.13 percent and 3.52 percent respectively. According to Rani and Baburao (2017) the prevalence of anemia was 74.5 percent and 82.6 percent in rural and urban area respectively. In a rural area, 84 (87.5percent) of girls were anemic who were menstruating more than 7 days and only 31 (45.6percent) were anemic who were menstruating less than 3 days.

CONCLUSIONS

The results suggest that the prevalence of anemia among adolescent of Pratapgarh district was 41 percent. Nutrition awareness, education should be given both to parents and to children.

REFERENCES

1. Chaudhary, S.M. and Dhage, V.R.(2008) A study of anemia among adolescent females in the urban area of Nagpur. *Indian J Community Med.* 33(4): 243–245.
2. Goyal, N., Rawat, C. and Kumar, S. (2015) Prevalence of anaemia among school adolescent girls. *Indian Journal of Community Health*, 27 (3) 398 - 401
3. Kamalaja, T., And M. Prashanthi. "Impact Of Change In Dietary Behaviors And Iron Supplementation For Reduction Of Iron Deficiency Anemia In Rural Adolescent Girls."
4. ICMR (2011) *Nutrient Requirement and Recommended Dietary Allowances for Indians.* Indian Council of Medical Research, NIN, Hyderabad.84.
5. Kotecha, P.V., Patel, S.V., Baxi,R.K., Mazumdar, V.S., Misra, S.,Mehta, K.G., Mansi, D. and Modi, E. (2013) *Dietary Pattern of Schoolgoing Adolescents in Urban Baroda, India J Health PopulNutr.* 31(4): 490–496.

6. **Melkam, T., Tilahun, Y., Wondimagegn, A., Yaregal, A. and Lealem, G.(2015)***Anemia and iron deficiency among school adolescents: burden, severity, and determinant factors in southwest Ethiopia.**Adolescent Health Medical Therapy.* 6: 189–196.
7. **Pariekh, A., Gandhi, S. and Pariekh, J. (2016)** *Prevalence of anaemia among adolescent patients of rural Mathura UP India. Journal of Dental and Medical Sciences.* 15(10): 24-28