

Health of Adolescents---Challenge for the Society

Abha Khetarpal,

Associate Professor- Dept. of Home-Science, D.A.V. College For Girls,
Yamunanagar (Haryana).

ABSTRACT

Adolescence is the critical phase of life with myriad of behavioural changes having changing patterns of social interactions and relationships. It is the window of opportunity that sets the stage for a healthy and productive adulthood and to reduce the likelihood of health problems in later years. It is also an age of impulsivity accompanied by vulnerability, influenced by peer groups & media that result in changes in perception & practice and characterized by decision making skills/abilities along with acquisition of new emotional, cognitive & social skills. Adolescent period being the transitional stage between the childhood and adulthood passes through many fold of changes, come across new challenges and experience. Although adolescence is generally considered healthy times of life, several important public health and social behaviors and problems either start or peak during these years. Also, many adolescents do die prematurely due to various reasons that are either preventable or treatable and many more suffer from chronic ill-health and disability. The present review focuses on the health behaviors and problems affecting adolescents in India. The review also identifies issues that need to be addressed for health and safety of young people in India. Diets consumed were predominantly cereal based which could be deficient in several nutrients. Inadequate intake of pulses, green leafy vegetables and fruits compounded by poverty, lack of knowledge, lack of availability etc. could be the main causes of prevalent deficiency disorders. . Thus, Anemia is a multi-factorial disorder that requires a multi-pronged approach for its prevention and treatment. Nutrition education is the need of the hour. It was observed that increase in physical activity levels, improved dietary intake along with positive life style changes resulted in bringing about the desirable changes in the health status of Adolescents.

Keywords: Nutritional anemia, adolescents, prevalence, awareness, nutrition education

Nutrition and health are two entities which are very closely related to each other. Any ill effect on one of them acts on the other. Anemia has been worldwide problem and its prevalence has been higher in developing countries when compared to the developed countries. According National family Health Survey – 3 (2005-06), women were more likely to be too thin and less overweight or obese in slums than in non-slum areas and

More than half of women (55 percent) were anemic. Women with mild, moderate and severe anemia were 39%, 15% and 2% respectively. The sample for the study comprised of 500 girls in the age group of 12-18 age group. The data was collected using a self designed questionnaire to assess the prevalence and awareness of anemia. The prevalence of mild, moderate and severe anemia was 11.8%, 78.2% and 5% respectively. Lack of awareness regarding anemia was 81.4% wherein 44.4% felt fatigued, 23.8% felt breathless and 14% exhibited no symptoms. It may be stated that habit of skipping meals, inadequate intake of essential nutrients will exert poor effect on growth & development and lead to various deficiency disorders.

INTRODUCTION

Adolescent period has been considered very crucial, since these are the formative years in the life of an individual, when major physical, psychological and behavioral changes take place. The nutritional and the health needs of the adolescents are also more because of the growth spurt and the increase in physical activity in them. In females, adolescence marked the beginning of the menstrual cycle or reproduction. In India, adolescent group constitutes around 21.4% of the total population. As a consequence of this rapid growth, adolescents were vulnerable to nutrition deficiencies (World Bank, 2003). Anemia is the result of a wide variety of causes that can be isolated, but more often coexist. The WHO estimates that more than 1/3rd of world population was anemic, of which iron deficiency anemia (IDA) was most common and serious problem of public health significance.

Diet and nutrition are important factors in the promotion and maintenance of good health. Income, prices, individual preferences, cultural traditions, social and economic factors all interact in a complex manner to shape dietary consumption patterns. Health and nutritional status of an individual depends on the food they eat. The components of the diet must be chosen judiciously to provide all the nutrients needed in adequate amounts and proportions. A normal balanced diet must include daily foods from the various food groups in sufficient amounts to meet the needs of an individual. Selection of foods from the different food groups also results in variety in the diet, which not only ensures nutritional adequacy but also increases food acceptability.

In view of the high prevalence of malnutrition and anemia reported among adolescent girls, the present study was undertaken with the following objectives:

- To assess the prevalence of anemia among adolescent girls residing in slums/peri-urban areas of Yamunanagar
- To assess the awareness of anemia.

METHODOLOGY

The present study was undertaken “To assess the prevalence of anemia among adolescent girls living in slum areas of Yamunanagar.” Four slum areas were selected, Purposive sampling was used to collect the data of adolescent girls living in slum. Data was collected from the dispensary and by home visiting The sample comprised of 500 adolescent girls, in the age group of 12 – 18 years. These adolescents were further divided into two sub-groups based on their age, 12 to 14 year and 15 – 18 year. 33.8% were in the age group of 12 – 14 year and 66.2% were in the age group of 15 – 18 year.

Methods used for the survey:. For the present study questionnaire-cum-interview method was used as it was appropriate for acquiring the necessary information.

Self Designed Questionnaire: Since no standardized test was available to fulfill the objective of present study, a self designed questionnaire was used. The questions were kept simple, unambiguous, and open and close ended that is arranged logically. Some questions were put to them in different manner so that the accurate information could be obtained from them in a polite manner. The questions were explained to some of the respondent in local language (Hindi) for their convenience and understanding.

This questionnaire consisted of following Parts:

1. Demographic information
2. Prevalence of Anemia
3. Awareness of anemia

Demographic information: This included question related to name, age, address.

Method used for Hemoglobin Testing: Blood samples were tested for hemoglobin level by using DrabkinsCyanmethemoglobin method with the help of technician.

WHO Standards of Hemoglobin levels to diagnose anemia (g/l)

Age Group	Non – Anemic	Mild Anemic	Moderate Anemic	Severe Anemic
Children 12-14 year of age	12.0 or higher	11.0-11.9	8.0-10.9	Lower than 8.0
Non-Pregnant women (15 year and above)	12.0 or higher	11.0-11.9	8.0-10.9	Lower than 8.0

Collection of Data: The questionnaire was pretested on a pilot sample of 30 adolescent girls. Changes were made in format and language of the questions, which posed any difficulty. All the subjects lived in four different slum areas were contacted. Initial interaction with respondents helped to arouse interest of the subjects and to gain their

cooperation. After this initiation they were quite willing to give all necessary information Their responses to various questions were recorded using interview method.

Analysis of the data: The data was analyzed for simple frequencies, percentages, arithmetic mean, standard deviation, ANNOVA, t-test of significance, & Chi-square test of association.

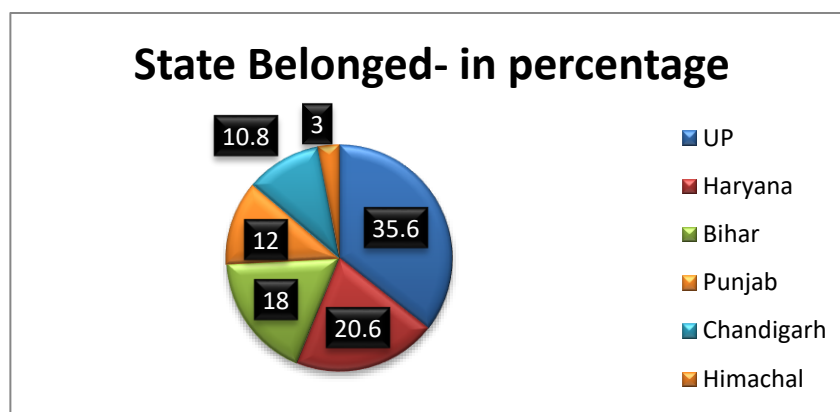
RESULTS AND DISCUSSION

DISTRIBUTION ON THE BASIS OF AGE GROUP

S.NO	AGE	PERCENTAGE
1	12-14	33.8
2	15-18	66.2
	Total	100.0

According to the above table out of 500samples, 33.8% belonged to 12-14 years agegroup, while remaining 66.2% belonged to the age group of 15-18 years. The mean age of the respondents was 15.9 years.

DISTRIBUTION ON THE BASIS OF STATE THEY BELONG TO



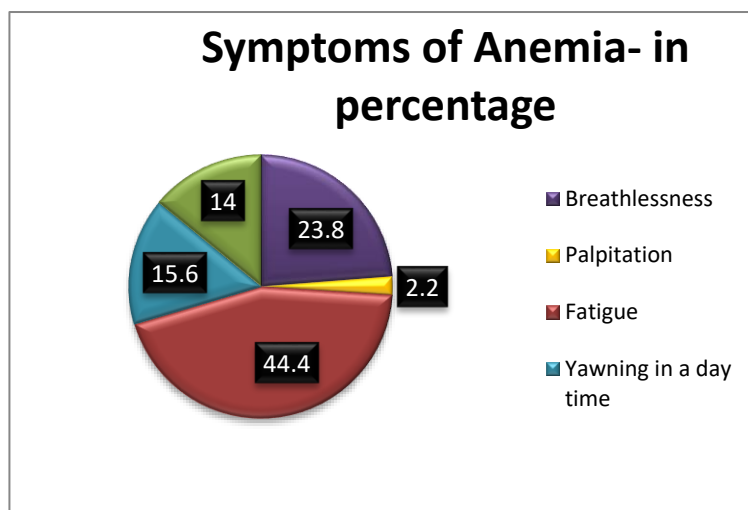
According to the above diagram, majority of respondents 35.6% belonged to Uttar Pradesh, 20.6% were from Haryana, 18% were from Bihar, 12% were from Punjab, 10.8% were from Chandigarh and only 3% were belonged to Himachal Pradesh. According to census 2011, Uttar Pradesh ranked highest share of slum population in India. Center for research and rural development found Uttar Pradesh, Bihar, Jharkhand and also neighboring state of Haryana, Himachal Pradesh and Rajasthan as the primary places The result was found to be corroborating with the national studies.

DISTRIBUTION ON THE BASIS OF HAEMOGLOBIN LEVEL

S.NO.	HEAMOGLOBIN LEVELS gm/dl	PRESUMMPTIVE DIAGNOSIS	PERCENTAGE
1	>=12	Normal	5.0
2	11-11.9	Mild	11.8
3	8-10.9	Moderate	78.2
4	<8	Severe	5.0
	Total		100.0

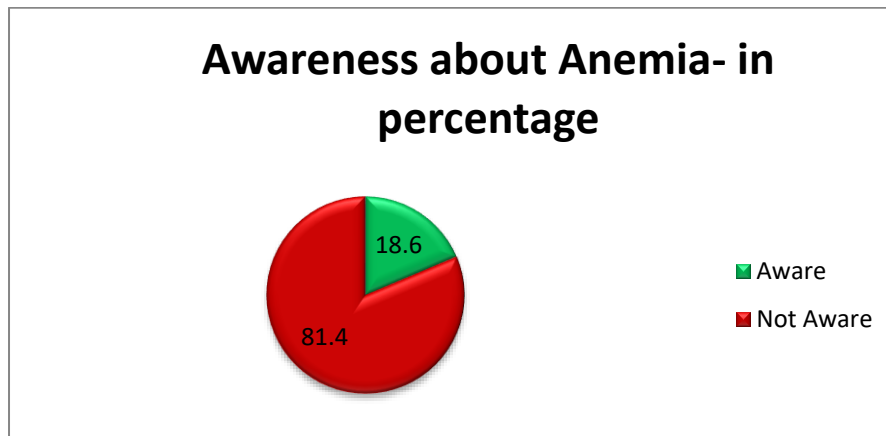
According to the above table,95% of the respondents were anemic and only 5% were non anemic. The prevalence of mild, moderate and severe anemia was 11.8%, 78.2% and 5% respectively. The mean Hemoglobin among the respondents was 9.9gm/dl. According to National Family Health Survey (NFHS 2005-2006), more than half of women that is 55% were anemic. The prevalence of mild, moderate and severe anemia was 39%, 15%, & 2% respectively. [11] Another study conducted in urban slums revealed that the prevalence of anemia was found to be very high 90.1% among adolescent girls. Majority of the girls were having mild or moderate anemia 88.6%. In adolescents, the fear of gaining weight and not being liked, examination anxiety and, irregular eating habits are the major causes for the lower intake of animal source foods leading to anemia. [23]

DISTRIBUTION ON THE BASIS OF SYMPTOMS OF ANEMIA



According to the above diagram, majority of the respondents ie. 44.4% showed symptom of fatigue, 23.8% breathlessness, 15.6% yawning in a day time and only 2.2% showed a symptom of palpitation. While 14% had showed no symptom of anemia.

DISTRIBUTION ON THE BASIS OF AWARENESS ABOUT ANEMIA



According to the above diagram, 81.4% of the respondents were not aware and remaining only 18.6% were aware about anemia. A study carried out in three villages of Nainital District, Uttarakhand in 2011, showed the knowledge regarding anemia among the subjects was 23.28%[24].

DISTRIBUTION ON THE BASIS OF HEMOGLOBIN IN RELATION WITH AGE

Age Group		>=12 gm/dl	11-11.9 gm/dl	8-10.9 gm/dl	<8 gm/dl	Mean + SD gm/dl	P Value
12-14	33.8%	4.7%	12.5%	75.7%	7.1%	9.9±1.09	.463 (NS)
15-18	66.2%	5.1%	11.4%	79.5%	4%	9.9±1.05	

NS = Non Significant

In the above table it was observed that majority of the respondents 75.7% and 79.5% were suffering from moderate anemia in 12-14 years and 15-18 years age groups respectively..

CONCLUSION

Adolescence has been a vulnerable period in the human life cycle for development of nutritional anemia. It is a multi-factorial disorder that requires a multi-pronged approach for its prevention and treatment . Success in prevention and control of anemia will contribute to reduction of maternal and child mortality and improve health outcomes for population as a whole. The study concluded that consumption of food was inadequate in the diets of adolescents. It may be stated that habit of skipping meals, inadequate intake of essential nutrients will exert poor effect on growth & development and lead to various deficiency disorders. Diets consumed were predominantly cereal based which could be deficient in several nutrients. Inadequate intake of pulses, green leafy vegetables and fruits compounded by poverty, lack of knowledge, lack of

availability etc. could be the main causes of prevalent deficiency disorders. So there is an urgent need to educate mothers of adolescents about the importance of balanced diet. They were ignorant about personal hygiene and cleanliness of the surroundings. The consumption of milk and milk products, vegetables and fruits was much less than the RDA proposed by ICMR (1990). The body weight, height and B.M.I of adolescents were below normal.

There were clinical signs and symptoms of anaemia, B-complex vitamin deficiencies. The dietary inadequacy of iron seemed to be the main causative factor of anaemia. They suffer from various health problems. Promoting healthy diets and lifestyles to reduce malnutrition and non-communicable diseases requires a multisectorial approach. The strategies must not only be directed at ensuring food security for all but they must be encouraged to consume adequate quantities of safe and good quality foods. Nothing short of radical change will help in raising the health and nutritional status of adolescents. A comprehensive plan of action to combat anemia with Nutrition education and awareness is essential.

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