



STUDY ON ANAEMIA AMONG ADOLESCENT FEMALES BASED ON DIETARY HABITS

Roshan Kumar Agrawal

Assistant Professor, Department of Community medicine, late Shri Lakhiram Agrawal Memorial Medical College, Raigarh, Chhattishgarh

Satyendra Prasad Singh*

Assistant Professor, Department of Community medicine, Late Shri Lakhiram Agrawal Memorial Medical College, Raigarh, Chhattishgarh *Corresponding Author

ABSTRACT **Aims Objectives:** To find out the effects of Dietary habits on prevalence of anaemia in adolescent females of one of the urban area of Bhubaneswar.

Materials and Methods: 290 adolescent females were included in study. The dietary habits of all females under study were analyzed and Haemoglobin was estimated by sahli's methods.

Results: Among 290 adolescent females 78.97percent found to be anaemic. It was noted that prevalence of anaemia is associated with consumption of green leafy vegetables.

KEYWORDS : Anaemia, Adolescent females, Dietary habits.

The word adolescent is derived from the Latin word, "adolescere", meaning "to grow, to mature". The WHO has defined adolescent as the age period between 10-19 years of for both the sexes (married and unmarried)². Among adolescents, girls constitute a vulnerable group, particularly in developing countries where they are traditionally married at an early age and exposed to a greater risk of reproductive morbidity and mortality.³ Adolescence more broadly refers to the phase of human development which encompasses the transition from childhood to adulthood. This period is 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. This is a vulnerable period in the human life cycle for the development of anaemia. Adolescent girls are at a high risk for anaemia and malnutrition due to inadequate nutrition, faulty dietary habits and ignorance. Inadequate nutrition during adolescence can have serious consequences throughout the reproductive years of life and beyond.

In Odisha, the data were limited. So this present study was carried out to assess the prevalence of anaemia in adolescent females and its association with dietary habits in an urban area of Bhubaneswar.

MATHODOLOGY

A community based cross sectional observational study was conducted in the urban field practice area of Hi-Tech Medical College & Hospital, Bhubaneswar, Odisha, among adolescent females. The protocol of the study was approved by the Institutional Ethical Committee (IEC) for human research of Hi-Tech Medical College & Hospital, Bhubaneswar. As per survey registers of Urban Health & Training Centre, the total no. of adolescent females was found to be 1315 in these area. With the simple random sampling total of 290 adolescent girls were included in the study. The data was collected by interviewing the adolescent females using a pre-designed, pretested schedule during home to home visit after obtaining consent. Information was collected regarding their socio-demographic status, menstruation history, dietary information etc. For Haemoglobin status Hb% was estimated by Sahli's method. The data thus collected were processed and analyzed by SPSS.

RESULTS AND OBSERVATION

As per the table-1, It was observed that majority of the adolescent girls 159(54.83%) were found mild anaemic, 70(24.14%) were found moderate anaemic and rest of 61(21.03%) girls was found within normal haemoglobin level. However no one had severe anaemia. Overall prevalence of anaemia was found to be 78.97%.

TABLE – 1 SEVERITY OF ANAEMIA

| Severity of anaemia | No. of Respondents | Percentage (%) |
|---------------------|--------------------|----------------|
| No anaemia | 61 | 21.03 |
| Mild anaemia | 159 | 54.83 |
| Moderate anaemia | 70 | 24.14 |
| Total | 290 | 100 |

TABLE – 2 DIETARY CLASSIFICATION

| Variables | No. of anaemic Respondents | No. of Non-anaemic Respondents | P value |
|---|----------------------------|--------------------------------|---------|
| Dietary habit | | | 0.407 |
| Vegetarian | 36 | 7 | |
| Mixed | 193 | 54 | |
| Green leafy vegetarian consumption | | | 0.001 |
| No | 14 | 2 | |
| ≤ 3 times per week | 167 | 32 | |
| > 3 times per week | 48 | 27 | |
| Milk consumption | | | 0.565 |
| No | 56 | 11 | |
| ≤ 3 times per week | 158 | 46 | |
| > 3 times per week | 15 | 4 | |
| Fruits consumption | | | 0.211 |
| No | 66 | 11 | |
| ≤ 3 times per week | 150 | 47 | |
| > 3 times per week | 13 | 3 | |

It was also observed that majority of the adolescent females 247(85.17%) took mixed diet and rest of 43(14.83%) were vegetarian. In the dietary information, we found that 16(5.52%) of the respondent not taking green leafy vegetable, 67(23.10%) of the respondents not taking milk, 77(26.55%) of the respondents not consuming any fruits in their diet.

The association between green leafy vegetable consumption and anaemia was found significant as anaemia is less (64%) prevalent in respondents consuming green leafy vegetable more than 3 times per week comparison to those consuming either less than 3 times per week (83.92%) or not consuming at all (87.50%).

DISCUSSION

As per the table-1, the prevalence of anaemia in the adolescent females was found to be 78.97% whereas less prevalence of anaemia has been quoted by Sanjeev M Chaudhary et al.⁴ and Abha Choudhary et al.⁵ that is 35.10% and 29% respectively. At the same time high prevalence of anaemia has been obtained by Meenal Vinay Kulkarni et al.⁶ and Swati Dixit et al.⁷ that is 90.10% and 83.3% respectively.

In this study it was observed that majority of the adolescent females 85.17% took mixed diet and rest of 14.83% were vegetarian. Whereas Premalatha T et al.⁸ found that 81.6% adolescent females took mixed diet. Rekha Dutt et al.⁹ found that 64% adolescent females took mixed diet. S. Kaur et al.¹⁰ found that 58.6% adolescent females took mixed diet. In Odisha, majority prefer a mixed diet, which may be a reason for the diet preference in the present study.

It was observed that 26.55% of respondents not consuming any fruits, 23.10% of respondents not taking milk, 5.52% respondents not taking green leafy vegetable. Priyanka Pareek et al.¹¹ found that 82% not

consuming green leafy vegetables daily, 95% not consuming fruits daily, 87% not consuming milk daily.

CONCLUSIONS

In conclusion, the present study revealed high Prevalence of anaemia (78.8%) to be a major health problem among the adolescent girls in urban areas. There was a higher prevalence of anaemia among girls who consume less green leafy vegetables. High prevalence of anaemia demands urgent intervention to bring down prevalence of anaemia in adolescent females. It can be lowered by intensive nutrition education by health care providers for prophylaxis and treatment through coordinated nutrition education.

REFERENCES

1. Nayar PD, Mehta R. Child Health. In: Gupta P, Ghai OP, Editors. Textbook of Preventive and Social Medicine. 2nd ed. New Delhi: CBS Publishers and Distributors; 2007; 428-37.
2. Programming for adolescent health and development: WHO Tech.Rep.Sr.no 886; 1996. 2.
3. Kaur S, Deshmukh PR, Garg BS. Epidemiological Correlates of Nutritional Anemia in Adolescent Girls of Rural Wardha. Indian journal of community medicine, 2006; 31(4):255.
4. Sanjeev M Chaudhary, Vasant R Dhage. A study of anemia among adolescent females in the urban area of Nagpur. Indian Journal of community medicine. Vol. 33 issue 4, October 2008, page no. 243-245.
5. Abha Choudhary, Prabhakar D Moses, Premkumar Mony, Methews Mathai. Prevalence of anaemia among adolescent girls in the urban slums of vellore, south india. Tropical Doctor 2006; 36; 167-169.
6. Meenal Vinay Kulkarni, P M Durge, N B Kasturwar. Prevalence of anemia among adolescent girls in an urban slum. National Journal of community medicine. Vol. 3 issue 1, Jan-march 2012, page no. 108-111.
7. Swati Dixit, Surya Kant, GG Agarwal, JV Singh. A community based study on prevalence of anaemia among adolescent girls and its association with iron intake and their correlates. Indian Journal of community medicine. Vol. 42 issue 4, October-December 2011, page no. 393-298.
8. Premalatha T, Valarmathi S, Parameshwari Srijayanth, Jasmine S Sunder and Kalpana S (2012) Prevalence of anemia and its associated factors among adolescent school girls in Chennai, tamil nadu, India. Epidemiol 2:2;118,
9. Rekha Dutt, Shirish Patil, Sumedha Joshi, Ranjana Mhatre, Ramdev. Prevalence od anaemia among adolescent girls in rural area of raigad district, Maharashtra. Indian Journal of preventive and social medicine (2009), vol. 40, page no. 143-146.
10. S. Kaur, P.R. Deshmukh, B.S. Garg. Epidemiological correlates of nutritional anemia in adolescent girls of rural Wardha. Indian Journal of community medicine. Vol. 31 issue 4, October-December 2006, page no. 255-258.
11. Priyanka Pareek, Asfia Hafiz. A study on anemia related knowledge among adolescent girls. International Journal of nutrition and food sciences. 2015; 4(3); 273-276.