A STUDY ON ANAEMIA AMONG THE ADOLOSCENT FEMALES IN THE URBAN HEALTH AND TRAINING CENTRE AREA

Community Medicine

Roshan Kumar Agrawal*	Assistant Professor, Department of Community medicine, Late Shri Lakhiram Agrawal Memorial Medical College Raigarh, Chhattishgarh, *Corresponding Author
Satyendra Prasad singh	Assistant Professor, Department of Community medicine, Late Shri Lakhiram Agrawal Memorial Medical College Raigarh, Chhattishgarh

ABSTRACT

This paper deals with the study of anaemia in the adolescent females in the urban health and training center (urban slum) area of Hi-Tech medical college, Bhubaneswar, Odisha. Here using simple random sampling technique we have taken the adolescents girls aged 10 to 19years both married and unmarried as a part of study. The data is collected through home to home visit by face to face interview. All the data collected are analyzed using SPSS based on demographic characteristics to high lights the important results, which is very much useful for the health authorities in order to take the favorable decision for subject under study.

KEYWORDS

Anaemia, Adolescent females, Demographic characteristics

INTRODUCTION

The word adolescent is derived from the Latin word, "adolescere", meaning "to grow, to mature"[1].The WHO has defined adolescent as the age period between 10-19 years of age for both the sexes (married and unmarried).There are about 1.2 billion adolescent in the world, which is equal to $1/5^{th}$ of world population and their numbers are increasing. Out of this, 5 million adolescents are living in developing countries. India's population has reached the 1 billion mark, out of which 21% are adolescents[2].

The nutritional anaemia in adolescent girls attributes to the high maternal mortality rate, the high incidence of low birth weight babies, high perinatal mortality. This phase of life is also important due to the ever-increasing evidence that the control of anaemia in pregnant women can be more easily achieved if a satisfactory iron status can be ensured during adolescence[3].Adolescents gain 30% of their adult weight and more than 20% of their adult height between 10-19 years, which we call as growth spurt[4].Adolescent girls are at a high risk for anaemia and malnutrition. Inadequate nutrition during adolescence can have serious consequences throughout the reproductive years of life and beyond[1]. Very often, in India, girls get married and pregnant even before the growth period is over, thus doubling the risk for anaemia[5].About 43% of the adolescent deaths are related to pregnancy. Pregnancy during adolescence deprives the girls from achieving their full growth according to their genetic potential[6].

For classification of anaemia, reference range of haemoglobin as per WHO classification is mild anaemia 10-11.9gm/dl, moderate anaemia 7-10gm/dl, severe anaemia less than 7gm/dl[7].As compared to the vast amount of work which has been done in pregnant mothers and young children, there are relatively few published studies are there based on adolescent females of this region of Odisha. Therefore, the present study is planned to carry out the study of adolescent females of this region.

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 predesigned, pretested schedule during home to home visit after obtaining consent. Information was collected regarding their socio-demographic status, history of any past and present illness, menstruation history, dietary information, drug history etc. Anthropometric measurement, systemic and general examinations were done. For Haemoglobin status Hb%

was estimated by Sahli's method. The data thus collected were processed and analyzed by SPSS.

RESULT AND OBSERVATION

A total of 290 adolescent females were included in the study. Below given table no 1 presents the distribution of respondents according to the severity of anaemia.

TABLE – 1
Severity of anamia

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

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 hemoglobin level. However no one had severe anaemia. Overall prevalence of anaemia was found to be 78.97%. Which can be clearly understand by given below pie chart.
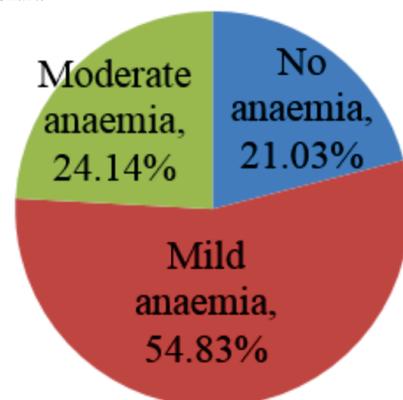

Figure 1: Pie chart of severity of anaemia

Table-2 presents the distribution of respondents according to the demographic characteristics. It was observed that, in the sample of 290 adolescent females under the study, the Christians females (87.50%) were found to be more anaemic in comparison to others. When we observed about categories of the females, we found that females who belong to general categories are having highest anaemic population (81.71%). Whereas an interesting result was found that, anaemia was independent from the family type and marital status because the data in table shows approximately equal percentage of anaemia females. Which is clearly shown with the bar diagram in figure 2.

TABLE – 2: Demographic classification of anaemic females

Variables	No. of Females	No. of Anaemic Females	Percentage (%)
Religion			
Hindus	254	199	78.35
Muslims	28	23	82.14
Christians	08	07	87.50
Categories			
General	82	67	81.71
OBC	124	99	79.84
ST/SC	84	63	75.00
Family type			
Nuclear	233	184	78.97
Joint	57	45	78.95
Marital status			
Married	269	212	78.81
Unmarried	21	17	80.95
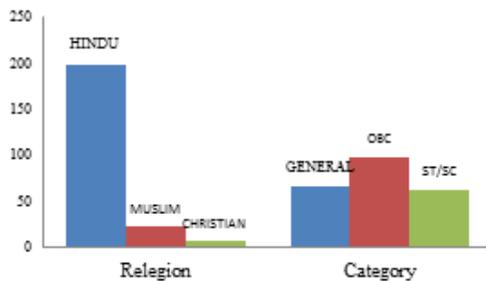
Figure 2: Bar diagram of demographic details.

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.[9] and Abha Choudhary et al.[10] that is 35.10% and 29% respectively. At the same time high prevalence of anaemia has been obtained by Meenal Vinay Kulkarni et al.[11] and Swati Dixit et al.[12] that is 90.10% and 83.3% respectively.

In comperion of Abha Choudhary et al.[10] and S Pattnaik et al.[13], we found that religion wise Christians and categories wise generals are found to be more anaemic that is 87.50% and 81.71% respectively. Whereas, Family types and marital status not having any affective role in anemic females.

CONCLUSIONS

The study area was found to be highly anaemic (78.97%) for adolescent females. High prevalence of anaemia is a public health concern for world wild and India. Urgent intervention is required to reduce the prevalence of anaemia in adolescent females which can be only possible by proper implementation of IEC activities for nutrition and anaemia related national programme.

REFERENCES

1. Nayar PD, Mehta R. child health. In: gupta P, ghai OP, editors. Text book of preventive and social medicine. 2nded. New delhi: CBS publishers and distributors;2007:428-37.
2. Mathur JSS. Preventive and social medicine, a comprehensive text book. 1sted. New delhi; CBS publishers and distributors;2007:382-89.
3. Kaur S, deshmukh PR, garg BS. Epidemiological correlates of nutritional anaemia in adolescent girls of rural wardha. Indian J Community med 2006;31:255-58.
4. Lal S, Pankaj A. Editors. Textbook of community medicine (preventive and social medicine). 1sted. New Delhi: CBS publishers and distributors: 2007:166-168.
5. Shoba S, sharada D. efficacy of twice weekly iron supplementation in anaemic adolescent girls. Indian paediatr 2003;40:1186-90.
6. Pathak P, singh P, kapil U, raghuvanshi RS. Prevelence of iron, vitamin A and iodine deficiencies among adolescent pregnant mothers. Indian J paediatr 2003;1989;17-36.
7. DeMeayer EM. Preventing and controlling iron deficiency anaemia through primary health care. A guide for health administrators, WHO;pg 26:1989.
8. Wayne W Daniel, Biostatistics, Basic consepts and methodology for health for the health sciences 9th edition. Pg 192.
9. 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.
10. 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.
11. 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.
12. 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.
13. Pattnaik S, Patnaik L, Kumar A, Sahu T., Prevalence of Anemia among adolescent girls in a rural area of Odisha and its epidemiological correlates. Indian Journal of Maternal and Child Health Volume 15, Issue 1, 2013.