



A STUDY TO DETERMINE THE EXTENT OF ANEMIA AMONG THE ADOLESCENT GIRLS IN SELECTED SCHOOLS IN RURAL AREAS, IN VIEW TO DEVELOP THE INFORMATION BOOKLET ON MANAGEMENT OF ANEMIA'.

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ABSTRACT **INTRODUCTION:** Anemia is a medical condition in which a person suffers from lack of red blood cells/hemoglobin in his/her blood levels, resulting in fatigue, impaired physical growth and weariness. The condition occurs due to deficiency of iron. Each year globally 1.62 billion people are affected with the anemia. According to National family Health Survey (NFHS-3, 2005-06) in India nearly 113 million the prevalence of anemia in adolescent girls is estimated at 56% and from this 17 % suffer from moderate to severe anemia. The objective of the study was to determine the extent of anemia among the adolescent girls in selected schools in rural areas.

Materials and Methods: Quantitative non-experimental descriptive survey design was used. The sample for the study was n=200 adolescent girls from selected schools of rural area were selected by using Simple random sampling technique. Assessment of anemia was done by using observation checklist followed that hemoglobin level estimation was done with the help of digital hemoglobin meter and a finding was recorded and the result were evaluated through structured questionnaire, observational checklist for clinical parameters. The data was analyzed using chi-square test.

Results: Extent of anemia majority (72 %) of the adolescent girls were identified as a mild degree of anemia i.e. hemoglobin level 10-12g/dL and (28%) of the adolescent girls were having moderate anemia i.e. Hemoglobin level 7- 10 g/dL. Findings also suggested that there was a significant association between clinical parameters and demographic variables. (P vale 0.01)

Conclusion: Anemia is one of the major health problems among the adolescent girls at rural area.

KEYWORDS : Extent Of Anemia, adolescent Girls, Hemoglobin, knowledge

INTRODUCTION:

Adolescent girls who constitute a sizable segment of its population form a vulnerable group and are at a greater risk of morbidity and mortality. It is the shaping period of life when maximum amount of physical, psychological and behavioral changes take place. This is a vulnerable period in the human life cycle for the development of nutritional anemia. Adolescent girls are particularly prone to iron deficiency anemia because of increased demand of iron for hemoglobin, myoglobin and to make up the loss of iron due to menstruation and poor dietary habits.

Globally, anemia affects 1.62 billion people (95% CI: 1.50–1.74 billion) an estimated 56% of adolescent girls in India are anemic, and this amounts to an average 64 million girls at any point in time. The prevalence of severe anemia (hemoglobin concentration below 70 g/L) at baseline was reported to be as high as 5.4% in Maharashtra.¹

World Health Organization (2002) stated global estimates of anemia prevalent averaged 56% with a range of 55-75% depending on geographic location world health organization (2002) India's high prevalence of iron-deficiency anemia among women between 60% & 70% of Indian adolescent girls are anemic, a condition that can result in adverse pregnancy outcome or even material death, as well reduced work productivity and impaired physical capabilities.²

Dutt rekha (2009) conducted study on prevalence of anemia among adolescent girls in rural area of Raigad district, Maharashtra. The participants in this study were 100 adolescent girls (10-19) years of age; Results revealed that, the prevalence of anemia was found to be 61%.³

Shanti Devi (2003) study reported Prevalence of anemia among adolescent girls is a matter of great concern, as these girls enter the reproductive life soon after the attainment of their menarche. The overall prevalence came out to be 73% among study subjects. On the basis of severity nearly half of subjects (54%) were found with mild anemia, 18% of girls had moderate anemia while 1% girls were severe anemic.⁴

Anemia is a public responsibility. Reducing the risk of Morbidity and Mortality it requires Public Private Partnership. Health care services must accessible to rural community mostly to vulnerable group. Education as well as Health sector is an key components for anemia control.

The present study was developed to identify extent of anemia in adolescent girls from the selected school of rural area.

OBJECTIVE:

1. To identify the extent of Anemia among the adolescents girls.
2. To determine the association between the degree of anemia with the selected demographic variables like age, education, religion, family composition and parents income.
3. To develop information booklet on management of anemia.

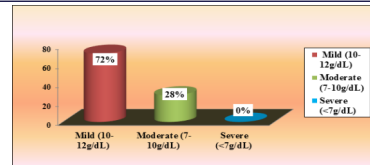
Materials and Method:

Quantitative research approach and non-experimental descriptive survey design was used. Sample was 200 adolescent girls from selected schools of rural area were selected by using Simple random sampling method. Development of the Data collection instrument. A Structured questionnaire was used during the data collection and this was developed based on the objective of the study and review of literature. Structured questionnaire tool was used which consisted of 3 sections. Section-I Demographic profile of Adolescent girls, Section-II Analysis of Hemoglobin with the help of observational checklist and digital hemoglobinometer. Assessment of knowledge score consider as Very good 60& above, Good 51-60%, Average 41-50%, Poor below 40% and section-III was Information Booklet.

Result: Profile of Adolescent girls majority of 24.5% adolescent girls were in 16 years of age, followed by 20.5% of them were in age of 12 years, 17% were in the age of 15 years, 14.5% were in the age of 13 years, 13 % were in the age of 14 years and (10.5 %) of them were in the 11 years of age. (23%) of the adolescent girls were in 6th std. 19% of were in 8th std, 17% of were in 10th std, 15.5% of were in 5th std, 15% of were in 7th std and 10.5 % of them were in 9th std. 42.5% girls parent had completed a education up to SSC, 65% adolescent girls were from nuclear family.

Table No.1 Distribution of knowledge score regarding anemia among the adolescent girls

| Sr. No | Grads of knowledge | Score | Frequency (f) | Percentage (%) | Mean Score |
|--------|--------------------|-----------|---------------|----------------|------------|
| 1. | Very good | 60& above | 33 | 16.5% | 12.84 |
| 2. | Good | 51-60% | 68 | 34% | 10.75 |
| 3. | Average | 41-50% | 41 | 20.5% | 8.65 |
| 4. | Poor | below 40% | 58 | 29% | 5.43 |

**Fig.No.1 Extent of anemia according hemoglobin estimation done with the help of hemoglobin meter.****Table No-2 Association of clinical parameters with the selected demographic variables.**

| Sr. No. | Variable | Groups | clinical parameter | | | 'x ² ' value | df | 'p' value |
|---------|----------------------|------------------------|--------------------|----------|--------|-------------------------|----|-----------|
| | | | Mild | Moderate | Severe | | | |
| 1 | Age | 10 yrs | 9 | 12 | 0 | 15.2 | 5 | 0.01 |
| | | 11 yrs | 10 | 31 | 0 | | | |
| | | 12 yrs | 11 | 18 | 0 | | | |
| | | 13 yrs | 4 | 22 | 0 | | | |
| | | 14 yrs | 4 | 30 | 0 | | | |
| | | 15 yrs | 6 | 43 | 0 | | | |
| 2 | Education (Standard) | 5 th (Std) | 8 | 23 | 0 | 12.13 | 5 | 0.03 |
| | | 6 th (Std) | 18 | 28 | 0 | | | |
| | | 7 th (Std) | 5 | 25 | 0 | | | |
| | | 8 th (Std) | 5 | 33 | 0 | | | |
| | | 9 th (Std) | 3 | 18 | 0 | | | |
| | | 10 th (Std) | 5 | 29 | 0 | | | |
| 3 | Religion | Hindu | 40 | 144 | 0 | 1.43 | 2 | 0.49 |
| | | Christian | 0 | 3 | 0 | | | |
| | | Muslim | 4 | 9 | 0 | | | |
| 4 | Parents education | Illiterate | 60 | 63 | 0 | 8.76 | 3 | 0.03 |
| | | Up to SSC | 90 | 66 | 0 | | | |
| | | Up to HSC | 4 | 24 | 0 | | | |
| | | Graduate and above | 5 | 3 | 0 | | | |
| 5 | Parents occupation | Employed | 25 | 74 | 0 | 2.48 | 3 | 0.4 |
| | | Unemployed | 5 | 18 | 0 | | | |
| | | Farmer | 11 | 40 | 0 | | | |
| | | Daily wages | 3 | 24 | 0 | | | |

The above Table no.2 represents that, there was the association between age and clinical parameters i.e. 'p' value(0.01) were less than the tabulated 'p' values i.e.0.05 as the age of the adolescent girls increases the extent of anemia were also increases .

There was the association between education (standard) with the selected clinical parameters i.e. 'p' value (0.03) is less than the tabulated 'p' value 0.05 as the education of the adolescent girls was increases but with that extent of anaemia among the adolescent girls were also increases.

There was the association between parents education with the selected clinical parameters i.e. 'p' value (0.003) is less than 0.05 as where the parents educational status was poor in that case the extent of anemia among the adolescent girls were more significant.

Conclusion:

The findings of the study concluded that majority of the adolescent girls suffering with mild & moderate anemia so it seems that anemia is the major health problem in adolescent girls which will affects their reproductive life. Based on the findings the anemia related knowledge to be provided to adolescent girls by implementing this topic in to their school curriculum. In present study Information Booklet on management of anemia had provided to adolescent girls.

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