



Iron Deficiency Anemia in Adolescent Girls

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Abstract

Iron deficiency is one of the most common micronutrient deficiency found in creating nations. Nourishing weakness can bring about deep rooted disservices including low efficiency, diminished resistant framework mental capacity and so on. An example of 250 youthful girls of age gathering of 13 to 18 years was chosen arbitrarily from rural zones of Beed area. The test bunch 'A' got dietary supplementation (ground nut and jaggary Ladu) for ninety days. While bunch C not got any supplementation and treated as control gathering. These examples were analyzed anthropometrically, biochemical and Clinical before and after supplementation. Anthropometrical information show that trial bunch result was better or great when contrasted with control gathering. Out of 250 juvenile girls 95% had haemoglobin level beneath 9gm. for example these immature girls were iron deficient rural juvenile girls were found to devour a repetitive supper and subsisted principally on oats destitution, lack of education and poor nourishment utilization design represents dietary paleness. These rural territories are disturbing and no. of deficiency ailments is seen. To take care of this issue sustenance education, nourishment sex and nourishment based methodologies are the best measures to address the miniaturized scale supplement deficiency like iron.

Key Words: Adolescents, Iron Deficiency, Education, Rural girls

Introduction

India is where there is rural system and women contain about part of its people. 80% of Indian women live in rural zones. Concurring diverse examination reports, the female adolescents build up right around one tenth of complete Indian people. (NIPCCD 1966), WHO 1996, Report of Government of India 2001) and the idea of this get-together is logically basic concerning

national progression. The pre-grown-up youngster, the youngster, the mother to be addresses an age gathering, (Chaturvedi et al 1994) which experiences a quick advancement period. Thusly energetic youngster's prosperity expects a noteworthy activity in choosing the sufficiency of things to come age. Since this period is a basic time of advancement, since it offers the second and last plausibility for compensate for some recent setbacks improvement in human life.

Regardless, most of the examinations found that the anthropometrical estimations, for instance stature, weight and MUAC were lower when stood out from well with do social events. It is a direct result of the improvement strategy of youth apply basically extended solicitations of both littler scale and enormous scale supplements, (Sokarjo et al 2004 Lopez martos 2004). Regardless, various examinations revealed that girls get inferior nature of diet. (Ghosh 1985 Gupta 1986, Bardhan 1987) Other than these girls will undoubtedly have low affirmations of imperativeness, sugars, iron, calcium and niacin . (Woodward 1985, NNMB 1975-80, pushpamma 1982, Seshadri 1992 Yeguang Jun 1995) According to Nutritional and prosperity profile data about 60% of girls from the organization schools were undernourished which, prompts coming about appetite makes girls progressively vulnerable against defilements and deficiency disease. At any rate various examinations exhibited that domain of Indian rural pre-grown-up girls is alarming , despite, the extended healthy essential during pre-adulthood considering the way that their ordinary enhancement confirmation is much underneath the proposed settlements (NNMB 1975 – 80 , Woodward 1985 , Seshdri 1992 , Indian profile 2003 , Venkail and Brothers 2003) .

The extension necessity for iron for girls during youth on one hand and the issue in meeting iron essential on the other hand make adolescents all things considered and girls explicitly logically slanted to iron deficiency shortcoming. An eleven country study found that over 40% of adolescents in Asian countries including India were iron lacking ($Hb < 115$ g/l Kurz 1996). The percent normality of whiteness among in pre-grown-up girls was 4, 12 , 23 in upper focus and poor budgetary social occasions separately (Khanduja and Agarwal 1969 , Khanane and Ghonekar 1997). While Narsing rao study shut the percent normality of fragility in 6 - 14 years. Females were 95.1, 66.7 and 18.4 exclusively. About 65% of the upper compensation and 79% ghetto pack adolescents girls of Hyderabad had different assessments of whiteness while 17 to 22% of the two social events had Hb levels underneath 10g/dl demonstrating moderate to

extraordinary fragility The general pace of sickliness (Hb < 12 percent) was around 25% paying little heed to urban and rural home (Raman 1990) This micronutrient deficiency(iron deficiency) in female adolescents can genuinely impact their prosperity (WHO 2006) i.e. this deficiency effectsly influence improvement , progression and viable cut-off points of rural adolescents girls. What's more it is clinically appeared by quick consumption, strong weakness, anorexia these indications can in like manner affect on physical work yield

To battle the frailty's concern in India, National Nutritional iron deficiency prophylaxis programs were begun. In this view in the present examination, an endeavor has been made to improve the continuous supplementation program to energize in rural territories of Beed locale. Simultaneously rather than restorative supplementation, it was chosen to evaluate the effect of dietary supplementation on sickly immature girls and improve the iron status of these rural youthful girls.

Objectives:-

- 1) To study the growth pattern of rural adolescent girls.
- 2) To know the dietary pattern of rural adolescent girls.
- 3) To know the socioeconomic status of rural adolescent girls.
- 4) To study the prevalence of anaemia in rural adolescent girls.
- 5) To impart the nutritional knowledge on rural adolescent girls.

Methodology: - The present study was carried out in the different rural schools and colleges of Chousala and Beed district two hundred forty rural adolescent girls in the age of 12 to 18 years belonging lower, middle and high income group were selected. A socioeconomic and dietary survey was carried out with the help of questionnaire cum interview schedule. All the information related to religion education monthly income, family type, and dietary habit etc. was collected and manipulated in the table form. One hundred fifty (150) rural adolescent girls were selected for dietary supplementation programme. These girls were divided in to two groups. In group (A) 75 adolescent girls were selected as experimental sample, but in group C seventy five adolescent girls were treated as control sample. Dietary supplementation i.e. (groundnut and jaggary Ladu 150gm) was provided to experimental sample for ninety days. But control sample

did not receive any dietary supplementation. Height, weight and mid arm circumferences of group A and group C samples were measured before and after supplementation.

HB level of all selected samples (150) were also analyses before and after supplementation. A thorough clinical examination of (150) selected sample was carried out with the help of physician before and after supplementation.

Result and discussion: -

The nutritional status of an individual mainly depends on socioeconomic the status of the family. The result of study revealed that maximum no. (48%) of study samples were in the age 14 to 15 years. It was noted that 23% of the adolescent girls were in the tenth std. It was found that 57.5% adolescent girls were belonging to nuclear family system. Majority of the head of families (father) i.e. 68.5% were working in agriculture field and only 8.5% were engaged in service. Therefore 51% families were having their monthly income less than 2500/- only 20 % families were having their income above 15000/- the backward character of agriculture and existence of industrial activity are the main reasons for poor conditions of rural families. Because their families were spending major part of their monthly income on farm cultivation and few families were spending their income on education.

The anthropometric survey revealed that the mean weight gain, height and mid arm circumference were increased significantly in group A i.e. experimental samples but there was no significant increase in weight. Height and mid arm circumference of group C (control samples). After applying WHO criteria for labelling anaemic women, it was observed Bio-chemically that 95% adolescent girls were anaemic. But the severity of anaemia was different in different samples. That means 90% of rural adolescent girls of experimental had mild, moderate, severe anaemia. While in control group samples 93.99% and 50% had severe anaemia. But after supplementation programme most of the adolescent girls become normal and only 53.33% experimental samples & 90% and Control Samples had moderate & several type anaemia respectively. But there was no decrease in anaemic samples of control group before supplementation majority of the experimental samples i.e. 85% were having less haemoglobin

level than normal, but after supplementation there had been increased in the Hb level of rural adolescent girls. But there was no increased in the Hb level of control group.

In the clinical examination 35% of adolescent girls appeared to be normal, but in 10 and 12% of samples have angular stomatitis and steatitis were present respectively. In the present study 24% and 23% of adolescent had poor and weakness symptoms disappeared. In control samples poor and weakness symptoms remained unchanged. These symptoms were present in rural sample due to inadequate supply of highly needed nutrients during this growth period. It was observed that dietary intakes of rural adolescent girls were very low and daily physical activity was high. Therefore these girls weight about 1 to 2kg less than urban counter parts. Similar observations were found in case of other variables, i.e. height and mid arm circumferences.

Conclusion

In the present study efforts have been made for rural adolescent girl for better nutritional status and improvement in the Hb level of the same. It was found that dietary supplementation of iron has the advantage of producing rapid improvement in iron status as well as it is beneficial and effective for increase in the Hb level of adolescent girls.

Finally it may be said that to change the dietary pattern of rural adolescent girls it is very important to start iron supplementation for the girls before adolescent period which can store the iron for present as well as future demands.

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