Iron Deficiency In Adolescent Girls

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ABSTRACT
This review study aims to learn how common anaemia is among adolescent females and to research the socio-demographic characteristics that are linked to anaemia. The issue of anaemia in adolescent girls is one that affects the entire world and is not specific to any one geographic area. About 56% of adolescent girls in India are thought to be at risk for anaemia. The government of India's actions and methods to address the problem of anaemia in adolescent females are discussed, as well as their efficacy. Due to increased demand during growth spurt, poor food intake, vulnerability to helminthic infestation, and increased iron loss during menstruation, the adolescent period, particularly in girls, is susceptible to anaemia. During menstruation, adolescent girls lose 12.5–15 mg of iron on average per month. (Dambalet.al., 2018)

The Government of India's key policies and programmes address the nutritional issues affecting teenage females, including anaemia. These include the Integrated Child Development Services (ICDS) scheme, the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG)-SABLA, and more recently, POSHAN Abhiyaan and AnemiaMukt Bharat. Monitoring the prevalence of anaemia is necessary for evaluating the effectiveness of such efforts because there are numerous initiatives addressing anaemia, many of which concentrate exclusively on adolescent girls. The most vulnerable subset of young women are those who live in rural areas and have reached menarche, in particular.

Anemia prevalence among teenage girls was estimated by the Comprehensive National Nutrition Survey (CNNS, 2017) in the state of Haryana to be 41% using venous samples, about double the prevalence reported in boys (22%). Menstrual abnormalities, easy fatigue, and poor physical and mental health consequences are all brought on by anaemia. Additionally, there is a high likelihood of poor literacy outcomes among adolescents(Subramanian, 2022)

Keywords: World Health Organization, Global concern, Vulnerable, Anemia.

INTRODUCTION: According to the World Health Organization, adolescence is the time between the age of 11 and 19 when the majority of girls enter puberty [WHO,2020]. During
this time, there is rapid growth and obvious changes in a person's physical, mental, intellectual, emotional, psychological, and behavioural patterns. And because of their rapid physical growth, they are also more susceptible to anaemia. Anaemia is caused by lack of Iron or Iron Deficiency is a problem of both national & global significance [WHO].

To address the issue of nutritional correction and lessen the long-term effects of anaemia, adolescent groups might be targeted. When it comes to nutrition, health education, and general growth and development, adolescent girls are the most neglected and vulnerable. Nutritional anemia is one of India's major public health problems. Adolescence is a vulnerable period in the human life cycle for the development of nutritional anemia. Anemia in adolescent girls contributes to maternal and foetal mortality and morbidity in future. Most of the health care services in India are for mother and child group.

**PREVALENCE OF ANEMIA**

In India, it is estimated that about 56% of the adolescent girls are prone to Anemia, which means at any given point of time about 6.40 crore adolescent girls are suffering from Anemia [3]. Study conducted in different states of India has revealed the prevalence of anemia as following [Aguayo, V. M, 2013].

### Table 1. Prevalence of anemia

<table>
<thead>
<tr>
<th>State/Union Territory</th>
<th>% of Adolescent Girls suffering from Anemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madhya Pradesh</td>
<td>52.50%</td>
</tr>
<tr>
<td>Gujarat</td>
<td>37%</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>56.30%</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>77.73%</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>58.40%</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>85.40%</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>21.50%</td>
</tr>
<tr>
<td>Karnataka</td>
<td>41.50%</td>
</tr>
</tbody>
</table>

- Category of population at the risk of contracting Anemia: Underweight and malnourished adolescent and Adolescents with chronic illness

Lack of iron-rich food sources in diets, which are needed and necessary by adolescents' developing bodies – The requirement is 1.37 mg to 1.88 mg for adolescent boys and 1.40 mg to 3.27 mg for adolescent girls.

**Obese & overweight adolescents :**

One of the main causes of anaemia in India is also poor sanitation, a lack of hand hygiene, and worm infestation.

Adolescent Pregnancy – owing to cultural beliefs of early marriages & early conception.

The above data are further confirmed in the regional studies done in Maharashtra by Sanjeev M Chaudhary, Vasant R Dhage [5]; Rajarathnam J, Abel R, Asokan JS, and Jonathan P. in the
Indian State of Tamil Nadu [6]; GS Toteja, P Singh, BS Dhillion, BN Saxena, FU Ahmed, and RP Singh – A study done in 16 Districts across India [7]; Bulliyy G, Mallick G, GS Seth, and SK Kar - Hemoglobin status of Non-school going girls in Odisha, India [8, 9].

The adverse effects of Anemia among adolescents

An adolescent age is when the overall growth takes place whereby, a unique identity is being formed for the individual which shall shape the rest of the life of the Individual. Anemia at this stage of life shall have some serious long term issues like:

- Stunted growth

Academic and extracurricular performance is poor. Poor memory retention, reduced attention span, and increased school drop out. decreased immunity, athletic endurance, and other physical abilities. complications related to pregnancy, menstruation, and parenthood. All this would, directly and indirectly effect the progress of the nation as well as the economy.

Fighting Anemia:

Fighting anaemia requires that both the general public and the administration be willing and interested in acknowledging the presence and prevalence of such a problem in the community. One key solution is to strategically target adolescents and take action by supplying additional iron supplements to combat anaemia caused by iron deficiency.

By implementing health education programmes at the school level and raising awareness among teenagers, both boys and girls, this strategic focus can be put into action.

CONCLUSION AND RECOMMENDATION

Nutritional anemia is one of India's major public health problems. Adolescence is a vulnerable period in the human life cycle for the development of nutritional anemia. Anemia in adolescent girls contributes to maternal and foetal mortality and morbidity in future.

According to studies on the prevalence of nutritional anaemia in India, anaemia affected 65% of infants and toddlers, 60% of children aged 1-6, 88% of adolescent girls (3.3% had haemoglobin below 7.0 g/dl; severe anaemia), and 9.9% of pregnant women. Compared to pregnancy, nursing women had a slightly greater incidence of anaemia. Anemia from iron deficiency is the most typical. National programmes to control and prevent anaemia have not been successful. The fortification of foods like milk, cereal, sugar, and salt with iron is one of the long-term interventions that should be adopted, according to international experiences in managing moderately severe anaemia. Use of iron cookware can add a significant amount of dietary iron when boiling milk or cooking vegetables, among other things. Nutrition education to boost dietary intakes in family for acquiring vital macro/micro nutrients as protein, iron and vitamins like folic acid, B12, A and C etc. for haemoglobin synthesis is important. Addition of
Folate with iron controls anaemia and is neuroprotective. Iron and folate may also be administered simultaneously with vitamin B12 due to evidence of vitamin B12 deficient anaemia in young children. (Kapur, et al. 2002).

The total frequency of anaemia among adolescent girls was highest in Maharashtra. Weight loss, an iron deficit, and pallor are all associated statistically. In order to combat the long-term effects of anaemia at an early stage, emphasis must be placed on adopting corrective measures for anaemia and iron deficiencies in girls before they enter the adolescent age group. It is necessary to increase adolescent girls' compliance with taking tablets by providing a consistent supply of iron and folic acid at AWCs. Through counselling and health education, adolescent girls' nutritional status can be improved. Thus it has been shown that iron deficiency can also have negative effects including fatigue, impaired physical performance and decreased work productivity, as well as impacting social activities. Iron deficiency occurs mainly when the requirements of iron increase during rapid periods of growth and development such as in early childhood, adolescence and pregnancy. Detecting iron deficiency early during pregnancy and in adolescents is crucial. Reducing anemia is one of the huge part of efforts to eradicate all forms of malnutrition. (WHO, 2020)

REFERENCES

3. https://doi.org/10.1017/S1368980012005587
5. wjpps.com/download/article/1417425593.pdf