A Study on the burden of Anemia among Adolescent females in the Urban area of Muzaffarpur District

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- **Abstract**

Anemia is decrease in number of RBC or less than the normal quality of hemoglobin in the blood or both or defective maturation of Red Blood Cells. Most important causes of nutritional Anemia is lack of iron. The consequences of anemia can affect outcomes of pregnancy especially teen age pregnancy. Besides it can also result in high rate of maternal mortally, genitourinary infection, respiratory infection, decreased immunity, lack of concentration, depression, disturbed sleep, if untreated cardiac failure may occur. To understand the severity of anemia a study was conducted with following objectives to investigate prevalence of Anemia. The study factors causing anemia.

Study was conducted in urban area of Muzaffarpur district. Adolescent females of 12-19 years were selected. Dietary intake, socio-economic and clinical data were collected by interview schedule. Blood sample was collected by technical for hemoglobin estimation. A significant association of anemia was found with socio-economic status, working mothers & nuclear family type. As the daughter of working mother were staying home alone or with their siblings & not taking food properly and were more interested in junk food. Majority of respondents were not taking food of animal origin. Citrus fruit & green leafy vegetables were not consumed by the most of them. More than one third was taking tea just after meal out of 100 respondents 26 percent were anemia & their scholastic performance was lower.

The result of the study indicates to impact nutrition education to working mother to include animal origin foods, citrus fruits and green leafy vegetables to reduce anemia among their adolescent girl. As anemia was prominent among school adolescent so school based interventions based on identified factors will be very crucial for the prevention and control of anemia among the adolescent females.

- **Keywords**

Mortality, Cardiac failure, Dietary intake, Junk food, Scholastic performance, interventions

- **Introduction**

Anemia is decrease in number of RBC or less than the normal quantity of hemoglobin in the blood or both or defective maturation of red blood cells. It is most common disorder of blood. It is prevalent in developing and underdeveloped countries. Most important cause of nutritional anemia is lack of iron. According to the report of NIN (2003-04) about 69 percent of the adolescent girls (12-17 years) were observed to be anemia. ICMR recommended dietary allowances of iron (2010) for adolescent girl is 26-17 mg/day. The consequences of anemia can effect outcomes of pregnancy, especially teen age pregnancy. Besides it can also result in high rate of maternal mortality, genitourinary infection, respiratory infection, decreased immunity, lack of concentration, depression, disturbed sleep, if untreated cardiac failure may occur. to understand the magnitude of anemia "A study on the burden of anemia among adolescent femals in the urban area of Muzaffarpur district will bring some favourable solution. The present study was conducted with following objectives :

(i)   To investigate the prevalence of anemia among adolescent girls.

(ii)   To study factors causing anemia.

- **Material &Methods**

A study was conducted in an urban area of Muzaffarpur district. A total no. of adolescent females (12-19 years) who voluntarily participated in study were selected systematic randomly. Dietary history was obtained by using 24 hours recall method to know the association between dietary intake & prevalence of anemia. Socio economic and clinical data were collected by an interviewer administered interview schedule. Blood sample was collected for hemoglobin estimation.

The study took place from January to July 2016. Statistical tools applied were frequency, percentage and co-relation.

- **Result and Discussion**

Socio-economic profile of respondents : A significant association of anemia was found with socio-economic status, working mothers and nuclear family type.

Table-1

Distribution of respondents according to socio-economic factors (N=100)

Category	Frequency (F)	Percentage (%)
Age (14-18 years)	57	57%
Income (8000-10000)	35	35%
Housewives	61	61%
Nuclear family	50	50%
Small family	59	59%
Education of family (good)	30	30%

As the daughter of working mother were staying home alone or with their siblings & not taking food properly and were more interested in Junk Food.

Dietary and food habit profile of the respondents : The additional iron is required for adolescent girl to meet iron looses during menstruation as well as growth need.

Table-2

Dietary and food habits of respondents (N=100)

Category	Frequency (F)	Percentage (%)
Not taking meat/fish/poultry	60	60%
Citrus fruit less than 2 times in a weak	54	54%
Not taking green leafy vegetables	49	49%
Taking tea just after meal	35	35%

Scientific study suggests that physical & physiological changes that occurs in adolescent girl imposes great demand on nutritional requirement if not fulfilled make them more vulnerable to deficiency.

The above table depicts that majority of respondent were not taking food of animal origin. Citrus fruit & green leafy vegetable were not consumed by most of them. More than one third was taking tea just after meal which hinders iron absorption.

Sin and symptoms of anemia observed among respondents : Pale skin, tiredness, headache lack of concentration, disturbed sleep, more bleeding was observed among respondents.

Table-3

Dietary and food habits of respondents (N=100)

Category	Frequency (F)	Percentage (%)
Pale skin	24	24%
Tiredness	27	27%
Headache	30	30%
Lack of concentration	35	35%
Disturbed on sleep	28	28%
More bleeding	29	29%
Anemic	26	26%

All respondents had attended their menarche out of 100 twenty six percent (26%) were anemic.

The scholastic performance was lower in anemic than compared to non anemic.

• **Conclusion**

Anemia was prevalent among those respondents who belongs to low socio-economic status and mother was oftenly out of home due to her outside work. The adolescent girl suffering with anemia was mostly vegetarian. Educational performance of the anemic respondent was low.

Most effective efforts should be dedicated to overcome this massive problem of anemia specially risk groups like adolescent girl who are future mother. The result of the study indicates to impart nutrition education to working mother to reduce anemia among adolescent girl.

Among school adolescents it was problem so school based interventions based on identified factors will be very important for the prevention & control of anemia among the group.

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