

## RESEARCH ARTICLE

# To assess the practices and attitude regarding iron deficiency anemia in adolescence girls of Amreli

■ Rashmi Dave, Jiju N.Vyas and Neha Tiwari

### SUMMARY

The study was conducted in purposively selected Amreli city of Gujarat State. Five Higher Secondary School were purposively selected from Amreli city *i.e.*, Municipal Girls High School, Ji Ji Ben Forward High School, Smt. S.S. Ajmera School, Smt. Shantaben Haribhai Gajera Sankul and B.N. Virani Higher School having maximum number of adolescence who were willing to participate in this study and were available during the period of data collection. Out of five higher secondary school 30 adolescences girls were randomly selected constituting the total sample of 150 adolescences girls for the present study. Data were collected with the help of structured interview schedule. Frequencies, Percentage and mean per cent score were used for analyzing the data statistically. out that 56.6 per cent of the respondents were from medium socio- economic status whereas 43.3 per cent of the respondents were in low socio-economic status. None of the respondents had high socio-economic status. Nearly half of the respondents (46.7 %) taking IFA (Iron folic acid), 73.3 per cent of the respondents know its benefits and none of the respondents feel any side effect after taking IFA tablets. More than half of the respondents (57.3%) feel weakness, (50.0 %) feel easily tired, feel breathless (13.3%) while doing routing work due to the deficiency of iron. Most of the respondents (70.0 MPS) feel fatigue, dizziness and leg cramps. Majority of the respondents (80.0 %) know that diet make a difference in anemia prevention, inclusion of iron-rich food in daily diet (80.0 %) and green leafy veg nutrition helps in improving iron level (80.0 %), with mean per cent score 70.0.

**Key Words :** Practices, Attitude regarding, Iron deficiency anemia, Adolescence girls

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### MEMBERS OF THE RESEARCH FORUM

**Author to be contacted :**

Neha Tiwari, Krishi Vigyan Kenda (MPUAT), Banswara, Udaipur (Rajasthan) India

Email : [nehatiwari@jau.in](mailto:nehatiwari@jau.in)

**Address of the Co-authors:**

Rashmi Dave, Krishi Vigyan Kenda (J.A.U.) Amreli (Gujarat) India

Jiju N. Vyas, S.D. Agricultural University, Sardarkrushinagar, Dantiwada (Gujarat) India

Adolescence is a transitional age of physical and psychological human development generally between puberty and legal adulthood. Adolescence is a second phase of life. It is “coming of age” as children grow into adult physically, mentally and socially. Adolescents account for 22.8 per cent of Indian population; that means 230 million Indians are adolescents in the age group of 10 to 19 years.

Adolescence is also a sensitive period, particularly for girls. WHO (World Health Organization) includes the period in life aged between 10-19 years as adolescence. The period is further divided into early (10-13 years), middle (14-17years), and late (18-20years). Girls typically start puberty around age 10-12 years and achieve their full growth at the age of 15(WHO 2010). Adolescence is a transition from dependent childhood to independent and responsible adulthood. Iron plays an important role in biology forming complexes with molecular oxygen in haemoglobin and oxyglobin. Iron deficiency is one of the most common of the nutritional deficiencies. Iron is present in all the cells in the human body and has several vital functions and decrease in iron may lead to morbidity and death. Iron deficiency anemia can cause shortened attention span, alertness and learning in adolescence. Anemia occurs when the hemoglobin concentration falls below the normal range for the age and sex of the individual. True anemia arises when there is an imbalance between red cell production and red cell destruction. Types of anemia are: Iron deficiency anemia, sideroblastic anemia, megaloblastic anemia, hypo plastic anemia and hemolytic anemia. The causes includes nutritional deficiency, mal absorption, blood loss etc. The body can store about one forth to one third of its iron, and it is not until those store are depleted that iron deficiency anemia actually begins to develop. Iron deficiency anaemia is the most common type of anemia in all age group, and it is the most common type of anaemia in the world. Iron deficiency anemia occurs when insufficient quantity of iron available for body's requirement. According to world health organization (WHO) the hemoglobin level should be 12 g/dl for adolescent girls. If it is less than 12 g/dl it is considered as iron deficiency anemia. According to WHO if the hemoglobin level is 10 g/dl then it is considered as mild iron deficiency anaemia, if the hemoglobin is between 7 g/dl to 10 g/dl then it is considered as moderate iron deficiency anemia and if the hemoglobin is less than 7 g/dl then it is considered as severe iron deficiency anemia. It is estimated that 2000 million people all over the world is suffering with anemia. More than 500 million people are affected, more commonly in under developed countries, where inadequate iron stores can result from inadequate intake of iron (seen with vegetarian diet) or from blood loss (eg. intestinal hookworm). In the United States of America adolescent girls are 10 times vulnerable to develop anemia than boys. Average western diet contains

10 – 15 mg of iron per day and about 10% this is absorbed. In factors of iron deficiency anemia are low intake of meat, fish, iron fortified food, frequent dieting, vegetarian eating style, meal skipping, heavy menstrual periods, intensive physical training etc. The iron deficiency anemia is usually correctable with oral supplements with ferrous sulphate (200 mg t.d.s.) usually it is well tolerated. Therapy should be continued until the anemia has resolved. To prevent anemia, diet naturally rich in iron should be provided. Therefore, the present study was conducted to assess the practices and attitude regarding iron deficiency anemia.

### Objectives:

- To find out the practice of adolescences girls regarding iron deficiency anemia.
- To assess the attitude regarding iron deficiency anemia in adolescences girls.

### MATERIAL AND METHODS

The study was conducted in purposively selected Amreli city of Gujarat State. Five Higher Secondary School were purposively selected from Amreli city *i.e.*, Municipal Girls High School, Ji Ji Ben Forward High School, Smt. S.S. Ajmera School, Smt. Shantaben Haribhai Gajera Sankul and B.N. Virani Higher School having maximum number of adolescence who were willing to participate in this study and were available during the period of data collection. Out of five higher secondary school 30 adolescences girls were randomly selected constituting the total sample of 150 adolescences girls for the present study. Data were collected with the help of structured interview schedule. Frequencies, Percentage and mean per cent score were used for analyzing the data statistically.

### RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

#### Age:

Data in Table 1 reveal that all of the respondents (100%) belonged to the age group of 15 to 18 years.

#### Marital status:

Table 1 reveals that all the respondents were unmarried.

**Table 1 : Distribution of respondent on the basis of their age, marital status and caste (n=150)**

S. No.	Categories	Frequency	Per cent
1.	Age		
I.	15-18 years	150	100
2.	Marital status		
I.	Unmarried	150	100
3.	Caste		
I.	SC/ST	40	26.6
II.	OBC	45	30.0
III.	Open	65	43.3

**Caste:**

It is evident from above Table that 43.3 per cent of the respondents belonged to open caste while 30.0 and 26.6 per cent respondents belonged to OBC and schedule caste/schedule tribes, respectively.

**Family structure:**

Data in Table 2 clearly indicate that majority of the respondents (70.0%) were from joint families and 30.0 per cent respondents were from nuclear families.

**Table 2 : Distribution of respondent on the basis of their family education occupation and organizational membership (n=150)**

Sr. No.	Categories	Frequency	Per cent
1.	Family types		
I.	Nuclear	45	30.0
II.	Joint	105	70.0
2.	Education		
I.	High school	125	83.3
II.	Senior secondary	25	16.6
	Occupation		
A.	Main – occupation of family		
I.	Farming	80	53.3
II.	Business /Service	70	46.6
B.	Subsidiary occupation		
I.	None	150	100
4.	Organizational membership		
I.	No membership	150	100
II.	Member of a formal organization	0.0	0.0
III.	Office bearer of formal organization	0.0	0.0
IV.	Member of non formal organization	0.0	0.0
V.	Office bearer of non-formal organization	0.0	0.0

**Education:**

Education is one of the most important determinants of a person’s social status. Regarding educational level of the respondents, Table 2 indicates that majority of the respondents (83.3%) were educated up to high school level, while, 16.6 per cent of the respondents were educated senior secondary level.

**Occupation:**

Table 2 regarding main occupation of the family revealed that half of the respondents (53.3%) had farming as their main occupation of family, whereas 46.6 per cent of the respondents had Business /Service.

Data in Table 3 clearly indicate that 31.3 have land holding 1.0 to 2.5 acres whereas 22.2 per cent have land holding 2.6 to 5.0 acres. Further table revealed that half of the respondents (53.3%) had media ownership like newspaper/magazines 20.0 per cent respondents had media ownership like radio/transistor and all the respondents (100%) had T.V. at their home. Most of the

**Table 3: Distribution of respondent on the basis of their economic factors (n=150)**

Sr. No.	Categories	Frequency	Per cent
1.	Land holding		
I.	1.0 to 2.5 acres	47	31.3
II.	2.6 to 5.0 acres	33	22.2
2.	Media ownership		
I.	News paper / Magazines	80	53.3
II.	Radio / Transistor	30	20.0
III.	Television	150	100
3.	Distinctive features		
A.	Transport		
I.	Bicycle	130	85.2
II.	Scooter/ Motor cycle	130	85.2
III.	Tractor trolley	20	13.3
IV.	Four wheeler	50	34.6
B.	Electricity		
I.	At home	150	100.0
II.	On farm	80	53.3
C.	Household items		
I.	Smokeless chullah	2	3.3
II.	Gas stove	150	100.0
III.	Pressure cooker	150	100.0
IV.	Improved kitchen tools	59	98.3
V.	Electrical kitchen equipment	50	83.3
VI.	Refrigerator	130	85.2
VII.	Sewing machine	17	28.3

respondents (85.2%) had transport facilities like bicycle and motor cycle whereas 34.6 and 13.3 per cent have four wheeler and tractor trolley. Further tables revealed that 100 per cent of the respondents had electricity at their home and 53.3 per cent had at their farm. Data regarding household item showed that 100 per cent have gas stove and pressure cooker, 98.3 per cent have improved kitchen tools, 83.3 per cent have electrical kitchen equipment, 85.2 per cent had refrigerator and 3.3 per cent have smokeless chullah.

### Socio- economic status:

On the basis of scores obtained by the respondents in different aspects of socio-economic status scale, the respondents were categorized in high, medium and low socio-economic status. Data in Table 4 point out that 56.6 per cent of the respondents were from medium socio- economic status whereas 43.3 per cent of the respondents were in low socio-economic status. None of the respondents had high socio-economic status.

Sr. No.	Items	Frequency	Per cent
1.	High socio- economic status	0.0	0.0
2.	Medium socio- economic status	85	56.6
3.	Low socio- economic	65	43.3

### Practice regarding iron deficiency anemia in adolescence girls:

Perusal of Table 5 regarding practice toward anemia revealed that more than half of the respondents (66.6%) consume tea in daily routing, one fourth of the respondents (26.6%) take tea after meal as they were not aware that tea and coffee inhibit the iron absorption so it not good practice towards anemia prevention. One fourth of respondent (24.0%) reported that they take lemon along with meal. Further table 6 regarding taking IFA (Iron Folic Acid), its benefits and side effects revealed that 30.0 per cent of the respondent taking IFA (Iron Folic Acid), 73.3 per cent of the respondents know its benefits and none of the respondents feel any side effect after taking IFA tablets. However respondents feel weakness (57.3%), feel easily tired (50.0%) and feel breathless (13.3%) while doing routing work due to the deficiency of iron. Regarding absenteeism in school during last 3 month due to any illness for a weak or more revealed that more than half of respondents (13.3%) were absence for the same reason. Similar findings were reported by Marwan *et al.* (2017). Practices of iron deficiency anemia revealed that 33.8 per cent of the adolescents usually consumed tea and coffee, while 66.6 per cent of them consumed tea daily. Also, 60 per cent of the adolescents regarded anaemia as serious conditions and feel easily tired and feel weakness, while 56.5% of them did not consider anaemia to be a serious

S. No.	Items	Frequency	Per cent
1.	Should consume tea/coffee after meal	40	26.6
2.	Consume tea in daily routing	100	66.6
3.	Take tea after meal	40	26.6
4.	Take lemon along with meal	36	24.0
5.	IFA (Iron Folic Acid) take in Anganvadi	70	46.6
6.	Take IFA (Iron Folic Acid)	45	30.0
7.	Know its benefits	110	73.3
8.	Take regularly	45	30.0
9.	Experience any side effects after taking it	0	00
10.	Feel any change after taking it	0	00
11.	Experience weakness in general	86	57.3
12.	Feel easily tired out	75	50.0
13.	Feel breathless while doing work routinely	20	13.3
14.	Were you absent in school during last three months due to any illness lasting for a week or more	20	13.3

**Table 6: Distribution of respondents regarding their attitude toward anemia (n=150)**

Sr.No.	Items	Strongly agree (3)		Agree (2)		Disagree (1)		MPS
		Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	
I.	Primary symptoms of anemia							
I	Fatigue	120	80.0	30	20.0	00	0.0	70.0
II	Heartbeat fasten	100	66.6	45	30.0	05	3.3	65.8
III	Headache	110	73.3	30	20.0	10	6.6	66.6
IV	Dizziness	120	80.0	30	20.0	00	0.0	70.0
V	Leg cramps	120	80.0	30	20.0	00	0.0	70.0
VI	Pale skin	60	40.0	60	40.0	30	20.0	55.0
2.	Adolescent girls more prone for anemia	100	66.6	40	26.6	10	6.6	65.0
3.	Diet make a difference in anemia prevention	120	80.0	30	20.0	00	0.0	70.0
4.	Inclusion of iron-rich food in daily diet	120	80.0	30	20.0	00	0.0	70.0
5.	You prefer doctor test for anemia	70	46.6	40	26.6	40	26.6	55.0

condition or were unsure. In addition, 45.0% of the adolescents liked the taste of iron-rich food items. Similar research was reports by Singh *et al.* (2019) that when girls were asked about the treatment of anemia, it was observed that (78.3%) felt IFA can treat anemia (28.3%) answered Vitamin C tablets and (26.6%). Majority (56%) of the participants told that the only source of iron-rich food is green leafy vegetables.

### Attitude regarding iron deficiency anemia in adolescence girls:

Data in Table 6 regarding attitude of respondents towards anemia shows that most of the respondents strongly agree with primary symptoms of anemia like fatigue (80%), dizziness (80%) leg cramps (80.0%) headache (73.3%), and heartbeat fasten (66.6%). When asking about that adolescences girl are more prone to anemia most of the respondents (66.6%) strongly agree with the statement. Most of the respondents agree that diet make a difference in anemia prevention (80%), inclusion of iron rich food in daily diet (80%) and use of green leafy vegetables (80%). However more than one third of the respondents (40%) strongly agree that vitamin C has a role in iron consumption. Similar research was reports by Singh *et al.* (2019). Majority (56%) of the participants told that the only source of iron-rich food and green leafy vegetables help in prevention of anemia.

### Conclusion:

Nearly half of the respondents (46.7 %) taking IFA (Iron folic acid), 73.3 per cent of the respondents know its benefits and none of the respondents feel any side effect after taking IFA tablets. More than half of the

respondents (57.3%) feel weakness, (50.0 %) feel easily tired, feel breathless (13.3%) while doing routing work due to the deficiency of iron. Most of the respondents (70.0 MPS) feel fatigue, dizziness and leg cramps. Majority of the respondents (80.0 %) know that diet make a difference in anemia prevention, inclusion of iron-rich food in daily diet (80.0 %) and green leafy veg nutrition helps in improving iron level (80.0 %), with mean per cent score 70.0.

### Recommendation:

- A community level training programme on attitude and practices regarding Anemia can be organize regarding measures to improve hemoglobin levels to promote the health status of adolescent girls.
- Administration level anemia preventive programmes can be organized and provide information materials and screening for anemia.
- Vocational training programme needed to be organized and use of traditional diet in prevention of anemia can be described.
- An experimental study can be conducted using control and experimental group.
- The future nursing curriculum can give more importance to the prevention of disease than the cure.
- A similar study could be conducted on larger sample.
- A comparative study can be conducted in between urban and rural areas to find out the effectiveness.
- Information booklets and manuals can also be prepared and distributed to the community about the prevention of anemia and traditional diet.
- There is a need to include anemia topic in school

book for adolescence girls.

## REFERENCES

- Marwan, O. Jalambo, Ihab, A. Naser, Razinah, Sharif and Norimah and A. Karim (2017). Knowledge, attitude and practices of iron deficient and iron deficient anaemic adolescents in the gaza strip, palestine. *Asian J. Clinical Nutrition*, **9** (1): 51-56.
- Mehnaz, S., Afzal, S., Khalil, S. and Khan, Z. (2006). Impact of iron folate and vitamin C supplementation on the prevalence of iron deficiency Anemia in non pregnant females of Peri Urban areas Aligarh. *Indian J. Community Medicine*, **31** (3): 201-203.
- Singh, M., Rajoura, O.P. and Raghavendra, A. (2019). Anemia related knowledge, attitude and practices in adolescent's school girls of Delhi: A cross- Sectional study. *Internat. J. Health & Allied Sci.*, **8**(2): 144-148.
- WHO UNICEF, UNU (2001). Iron deficiency anaemia: assessment prevention and control. A guide for program managers. Geneva: World Health Organization; 2001. WHO-NHD/01.3

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