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Perception of Anaemia among Adolescents: A Quantitative Approach

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Abstract: **In India, girls who constitute a sizable segment of its population form a vulnerable group and are at a greater risk of morbidity and mortality. Anemia is widely prevalent in India and it affects both sexes and all age groups. Among gender, girls constitute a vulnerable group particularly in developing countries. In a family with limited resources, the female child is more likely to be neglected. The added burden of menstrual blood loss precipitates the crisis too often. The age of 17 to 23 years is the formative period for girls in life who starts to face society at individual level after schooling. And this is also a susceptible period in the human life cycle for the development of nutritional anemia. Hence this study was planned to assess the knowledge, attitude and practices of college going girls towards anemia and its risk factors. The Convenient Sampling Method was used for this study to select respondents. The sample comprised of 150 College going girls from different age groups and locations in Chennai city is collected using KAP Survey. Simple statistical method is carried out to fulfil the objective of the study and analyze by using SPSS software - version 17. Thus the result reveals that, majority of them had no full or correct information about anemia. The level of knowledge, Attitude and practice regarding anemia, prevention, diagnosis and medical management is not good enough. Health education on Anemia and its risk factors is required to improve and maintain the level of knowledge and aptitude of Adolescents girls in Chennai.**

Keywords: **Anemia, College Girls, KAP survey.**

I. INTRODUCTION

Anaemia is a worldwide problem in persons of all ages, it is not a diagnosis but rather a sign or symptom of underlying disorder. Anaemia is a condition where there is a reduction in haemoglobin concentration in the red blood cells. Haemoglobin is the iron containing pigment of red blood cells, which carries oxygen from lungs to the tissues, in other words, anaemia is manifested by decrease in the oxygen carrying capacity of blood. Anaemia is a major medical problem, affecting people of all ages all over the world. Anaemia is widely prevalent in all the states of India among all the age group including children, adolescent girls, pregnant and non pregnant women. In India, college girls contribute major portion of population. It has been reported to be a major micronutrient deficiency and its prevalence was reported to be above 80 percent in various states of India. Wide prevalence of anaemia, among communities will results in a poor health of any country. It is most silently prevalent deficiency disease all over the world. In India, it was found to have an association with literacy status of mother, occupation of father, structure of family, types of diet, caste, birth order, types of activities etc.

College girls are the nutritionally vulnerable population of the community. Food and nutrient needs are proportionally higher during this period of life. Still Indian girls are used to deprive from essential nutrients like proteins, vitamins and minerals due to lack of nutritional knowledge, poor environmental sanitation, trend of figure, consciousness and low socio economical condition of family. So they face series of nutritional challenge especially unbalanced nutrition like Anaemia

which affect their growth and development as well as the quality of our future generation. Anaemia is more prevalent among Indian college girls due to secondary growth spurt, increased amount of blood volume as well as for menstrual loss of blood. In India, more than half of the college girls in the age group of 18 to 23 years are suffering from various types of anaemia. Respect to this issue, it is very important to run health education programs to prevent anaemia. Health education in College plays a vital role in increasing knowledge of the students. With this background, this study has been undertaken to assess knowledge, attitude, and practices among the college girls regarding anaemia in Chennai city.

II. AIM AND OBJECTIVE OF THE STUDY

The main Aim and objective of the study is to assess the knowledge, attitude, and practice regarding anaemia among College girls.

III. STUDY AREA

Chennai is situated on the north-east end of Tamil Nadu on the coast of Bay of Bengal. It lies between 12° 9' and 13° 9' of the northern latitude and 80° 12' and 80° 19' of the southern longitude. It stretches nearly 25.60 km. Along the Bay coast from Thiruvanmiyur in the south to Thiruvottiyur in the north and runs inland in a rugged semi-circular fashion. It is bounded on the east by the Bay of Bengal and on the remaining three sides by Chengalpattu and Thiruvallur Districts. It is a major commercial, cultural, economic and educational center of South India.

Chennai, the capital city of Tamil Nadu is a hub of numerous reputed educational institutes, colleges in Chennai and Universities. The educational institutions and colleges in Chennai impart high standard of education and the graduates from the institutions are well placed in different sectors. Chennai ranks second among Indian metropolitan city centres with a 90.33 percent literacy rate. Chennai has a mix of public and private colleges, some of which also receive financial support from the government. English is the medium of instruction in the majority of institutions for higher education. Colleges for science, arts and commerce degrees are typically affiliated with the University of Madras, which has three campuses in the city. The Indian Institute of Technology Madras (IIT Madras) and the College of Engineering, Guindy, Anna University are two well known centres for engineering education in the city. The Indian Army's Officers Training Academy is also headquartered in the city.

IV. REVIEW OF LITERATURE

Seetharam et al. (1997) conducted a study on prevalence of nutritional anaemia in selected girls of Mysore city. In this study 510 girls in the age group of 16-22 years from Maharani's science college were selected. 68percent of them had a family income of Rs 2001 – 5000 per month and majority (82 percent) of them had college education. A significant percentage of the girls (60percent) were anaemic. Among the anaemic girls, 32percent, 36percent, and 2 percent of them were moderately, mildly and severely anaemic respectively. Distribution of difference was similar in all the age groups. Paleness of the tongue and eyes were predominant clinical signs among the girls which indicated anaemia. The mean weight of the girls (16-17 years) was 45.5 kg and height was 157 cm. The mean height and weight of these girls were lower than the NCHS standards. As per the BMI classification, all the girls of 18-22 years belonged to grade I chronic energy deficiency. Height and weight had no impact on anaemic conditions. However, weight and BMI decreased as the severity of anaemia increased, which were not statistically significant. Educational level of the parents and income of the parents showed no influence on occurrence of anaemia. It is noteworthy to mention here that the children of educated and high income families also suffered from anaemic condition. There is an urgent need for nutrition education of girls and parents to prevent anaemia.

India, DLHS – RCH, (2002-04) and figure 2.3 & 2.4 showed prevalence of severely and moderately anaemic adolescent girls (10-19 years) by State and in India, 49percent and 27 percent of adolescent girls were moderately and severely anaemic. The state of Chattisgarh has the highest percentage of adolescent girls who are either moderately or severely anaemic (88percent) followed by Haryana (86percent). In the states of Andhra Pradesh, Bihar, Delhi, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Punjab, Uttar Pradesh and West Bengal, the combined prevalence of either moderate or severe anaemia among adolescent girls is in the range of 70-80 percent. The states where this percentage is between 50-70 percent included Karnataka, Tamil Nadu, Uttaranchal, Arunachal Pradesh, Tripura and

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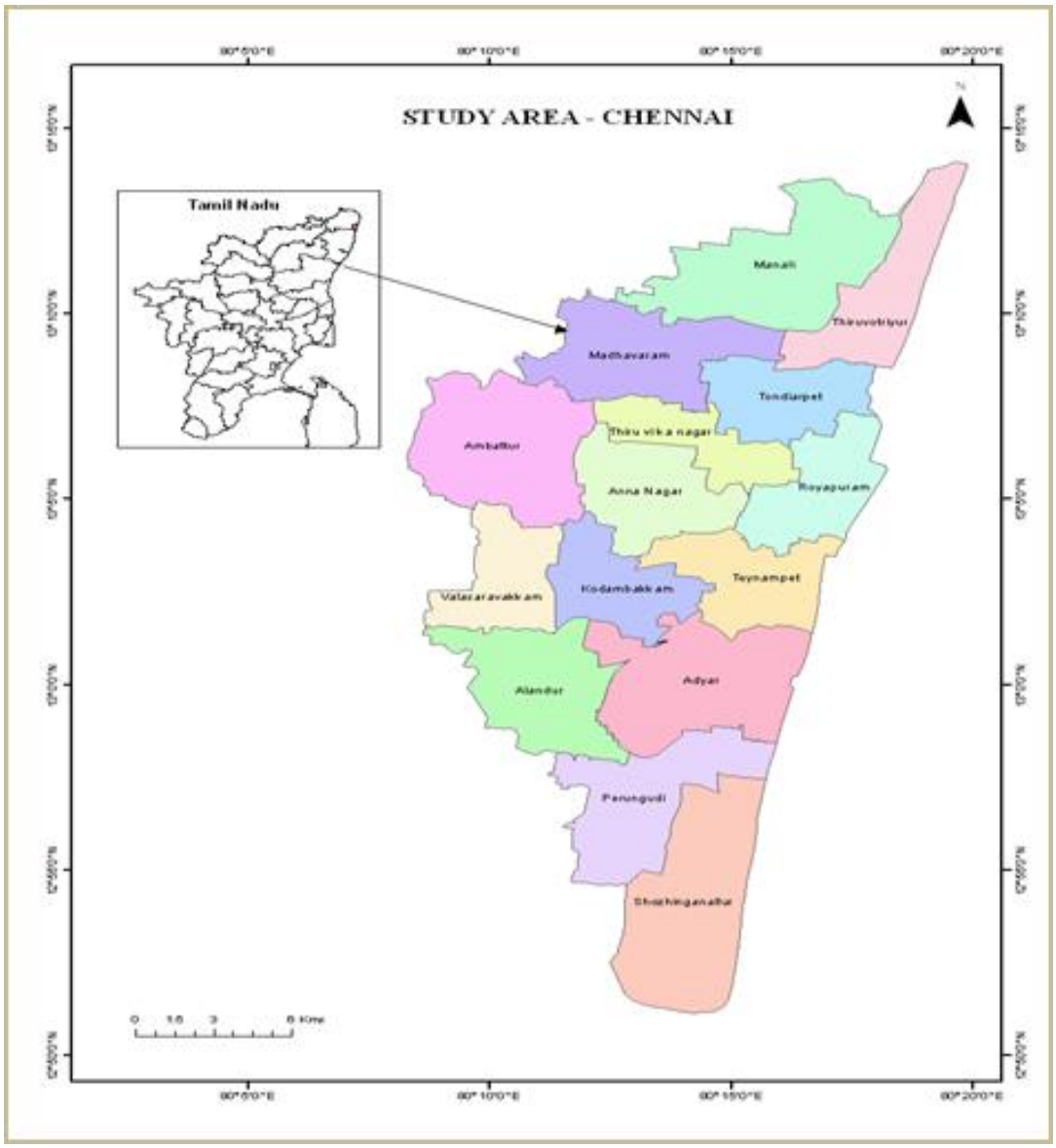
Nagaland. In the rest of the states in India, the percentage of adolescent girls who are either moderately or severely anaemic is less than 50 percent.Among them , the low percentages in Jammu and Kashmir (26percent) and Kerala (32 percent) are noteworthy. High concentration of anaemic adolescent girls is found in Gujarat, Maharashtra, Punjab, Haryana, Orissa and Assam. In India as whole, only 61 out of 542 district fall in the category of low prevalence of moderately anaemic adolescent girls, 186 districts fall in medium prevalence and 295 districts in high prevalence categories. In more than 50percent of the districts of Uttar Pradesh, Madhya Pradesh, Maharashtra, Punjab, Haryana, Orissa and Assam more than three-fourth of adolescent girls in the age group 10-19 years are either moderately or severely anaemic. It is remarkable that the states such as Punjab and Haryana, despite being economically and agriculturally more advanced than other states, show relatively high prevalence of moderate and severe anaemia among adolescent girls.



Bentley and Griffiths (2003) conducted a study for the burden of anaemia among women in India .The research investigates the prevalence and determinants of anaemia among women in Andhra Pradesh from the data of The National Family Health Survey 1998/99. A total of 4032 married women aged 15-49 years from 3872 households and found 32.4 percent of women had mild ,14.19percent had moderate and 2.2 percent had severe anaemia. Protective factors include Muslim religion, reported consumption of alcohol or pulses, and high socio- economic status, particularly in urban areas. Poor urban women had the highest rates and odds of being anemic.52percent of them were underweight and 41 percent of women were overweight. New program strategies are needed, particularly, those to improve the overall nutrition status of women of reproductive ages.

Shekhar (2005) conducted a study on iron status of adolescent girls and its effect on physical fitness. 150 college going adolescent girls aged 17-19 years were enrolled for the study. Background information, anthropometric measurements, dietary intake and menstrual history were recorded. The mean age of girls was 18.5 years, with 95.2 percent being of 17-18 years of age. The mean height was found to be 156.6 cm, and mean weight was 51.5 kg. The mean BMI of the subjects ranged from 16.8 to 20.8. Out of 150 subjects, 68 students were found to be normal, although none were observed to be severely anaemic (Hb < 7 g/dl); 12.6 percent and 46percent subjects were moderately and mildly anaemic, respectively. Approximately 74 percent girls with moderate anaemic, approximately 28 percent girls with mild anaemia were correctly identified when pallor of conjunctiva, eyes and tongue was used to examine and assess anaemia. The sensitivity of identifying girls with symptoms like weakness, tiredness, irritability and breathlessness for moderate, mild and severe anaemia was 61 percent and 20 percent; respectively. The mean age of menarche was 13 years and the menstrual cycle was regular among 75 percent of adolescents. Mean daily iron intake was observed to be less than 50 percent of the RDA, whereas the ascorbic acid intake was adequate, leading to many adolescent girls having normal haemoglobin levels in spite of iron consumption being less than Recommended Dietary Allowances (RDA).

V. MATERIALS AND METHODS

This study was conducted in the college which located in Chennai city. The Convenient Sampling Method was used for this study to select respondents. The sample comprised of 150 College going girls from different locations in Chennai city was collected using KAP Survey method. All girls aged 17–23 years enrolled as students in the colleges, who are resident in Chennai and who are willing to participate were recruited for the study. The semi -structured interview schedule was prepared and used as a tool for collection of primary data. The instrument used in the study was the interview schedule, which was considered to be the most appropriate to get the correct response and information from the college girls. Interview was conducted among study subjects to assess the knowledge, attitude, and practice toward anaemia. Simple statistical method is carried out to fulfil the objective of the study. The literature search was includes both carried out from printed and electronic sources. Printed materials included books, reports, dissertations, periodicals (journals, magazines and newspaper), statistical report, manuscripts and hand books used for secondary data.

VI. KNOWLEDGE, ATTITUDE AND PRACTICES (KAP) SURVEY METHOD

A Knowledge, Attitude and Practices (KAP) survey is a quantitative method (predefined questions formatted in standardized questionnaires) that provides access to quantitative and qualitative information. KAP surveys reveal misconceptions or misunderstandings that may represent obstacles to the activities that we would like to implement and potential barriers to behaviour change. Note that a KAP survey essentially records an “opinion” and is based on the “declarative” (i.e., statements). In other words, the KAP survey reveals what was said, but there may be considerable gaps between what is said and what is done.

TABLE I: PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS

	Personal and socio-economic characteristics	College Girls (In percent)
Age(years)	17	9
	18	32
	19	26
	20	12
	21	10
	22	4
	23	7
Year of the study	UG	79
	PG	21
Marital Status	Married	8
	Unmarried	92
Family Income	<10000	6
	10001-20000	82
	20001-30000	9
	30001 and above	3
Type of Diet	Non vegetarian	98
	Vegetarian	2

A. Personal and socio-economic characteristics:

The findings related to personal characteristics (Table – 1) revealed that the age of college girls were ranged from 17 to 23 years, 32 percent of them from 18 years and 26percent of the girls from 19 years. Among the 150 girls, 79percent were from Under Graduation and 21 percent were from Post Graduation. Majority of the girls (92percent) were unmarried. 98 percent of the girls consumed Non vegetarian diet. 82percent of girl's family monthly income was Rs.10, 001 to 20,000.Majority of girl's parents were educated up to secondary level and majority girl's mother were housewives.

B. Knowledge toward Anaemia among College Girls:

In this study (Fig-1), out of 150 College girls, 91percent had heard about anaemia. The main source of information was school and College teachers (35percent), 30percent of them followed by the doctor or other healthcare personnel. 73percent of them knew that anaemia is a health problem. In 91percent girls who had heard of anaemia, 33percent of them did not know what happens in anaemia and only 36percent of the girls answered correctly that there is decreased haemoglobin in anaemia. Only 40percent girls told anaemia is due to deficiency of iron and 19percent of them did not know the answer. 33percent of the girls told poor diet is the only cause for anaemia and 14percent of them answered anaemia is due to multiple causes such as worm infestation, poor diet, and excessive flow during menstruation. 31percent of the girls told tiredness or body weakness is the only feature of anaemia and 12percent of them answered anaemia clear with multiple signs and symptoms. 35percent of the girls told anaemia impacts on only physical growth and development and 13percent of them answered anaemia impacts on physical growth, learning process, and decreases work capacity. When we asked about the preventive measures against anaemia, 44percent of them told consumption of iron-rich food is the only protective measure and 8percent of the girls answered multiple correct measures. 56percent of the girls told green leafy vegetables (GLVs) are the only source of iron-rich food and 13percent of the girls answered sprouted pulses, GLVs, meat, and poultry all are rich sources of iron. 43percent of them told tea or coffee reduces iron absorption and 74percent of them told vitamin 'C' enhances iron absorption.

C. Attitude toward Anaemia among College Girls:

Fig. 2 shows that out of 150 girls, 64percent of the girls opined that it's good to include iron rich food in their daily diet; 68percent of the girls felt that Iron needs of college girls are different from others; and 56percent of the girls opined that taking iron and folic acid tablets prevents anaemia.

D. Practice toward Anaemia among College Girls:

Fig. 3 shows out of 150 girls who had heard about anaemia, only 34percent of them had checked their haemoglobin to know their anaemia status. Out of 150 girls, 27 percent of them had taken iron tablet once in the last one year. 66 percent of the girls had taken twice a year. Within 91percent of the girls who had heard about anaemia, 12percent of them were consuming iron-rich food daily and 66percent of the girls were consumes once in a week.

E. Treatment-Seeking Behaviour:

In this study 91percent of the girls who had heard of anaemia, 24percent of them told they will take only home remedy if they get anaemia and 55percent of the girls told they will consult doctor and take iron tablets.

VII. DISCUSSION

In this study out of 150 girls, 91percent of the girls had heard of anaemia, 73percent knew that anaemia is a health problem, 36percent of them answered correctly that haemoglobin decreases in anaemia. 40percent of them in our study told that anaemia is due to deficiency of iron and this result was higher in an observed study. In our study, 12percent girls knew about multiple signs and symptoms of anaemia. 44percent girls told that consumption of iron-rich food was the only protective measure against anaemia and 56percent subjects told that Green Leafy Vegetables were the only source of iron-rich food. 81.4percent of the girls did not know that the anaemia could be prevented or treated. 43percent girls told that tea or coffee reduces iron absorption and 74percent answered that vitamin C enhance iron absorption. In our study, 55percent of the subjects stated they will go to doctor for check up and take iron tablet if they suffer from anaemia-related symptoms. This study shown on an average that 57 percent had poor knowledge, 33 percent had unfavourable attitude, and 32 percent of them did not perform appropriate behaviour to prevent anaemia.

VIII. CONCLUSION

College girls exhibited good knowledge toward anaemia but poor attitude and practice. However, college girl's knowledge alone is not sufficient to impact practices and attitudes. Behavioural, physiological, and socioeconomic limitations must be addressed efficiently. Dissemination of comprehensive nutritional knowledge regarding diet and supplements should be made.

Recommendation:

There is a need to include Behavioural Change Communication strategy so that students consume diet rich in iron and in the long run it will result in remarkable improvement of the iron status of the students.

Implication:

- It is evident from the study that majority college girls parents were educated up to primary and secondary level hence they require special training on diet and nutrition, and care of common diseases.
- The training program on college girls related aspect should be organized by government, primary health centre at village level and referral hospital at town level and civil hospital at city levels.
- Health and nutritional status of college girls in both area is similar but overall health and nutritional status was not found satisfactory in relation to anthropometric indices i.e. BMI and haemoglobin. These facts pertains that the parents of the college girls are either care less or they did not coup up with the anaemic condition due to poor awareness and poor health and nutritional knowledge. Hence, government should extend medical facilities at the door step of the people of rural and urban poor areas.
- The colleges have to organize programs related to creating awareness regarding health and nutrition and try to improve overall health awareness.
- The parents of the college girls of the study area should be inform about the importance to follow healthy dietary habits which could improve the nutritional status in parallel with overcoming the devastating economic conditions.
- The lack of attitude and practice of anaemia was significantly higher in girls. This facts demands urgent attention of the parents and medical services provided as it will affect badly when she become pregnant. Therefore, the mothers of the girls and the girls herself should be trained in respect of balanced diet to combat iron deficiency.
- People should be acknowledged about low cost and highly nutritious food items to ensure balance diets through nutrition education. Mass media can play vital role to educate the people in these respect.
- Providing equality of opportunities in education encompasses taking care of the nutritional needs of all girls (from childhood) for ensuring optimum growth and good nutritional status. A proactive role from the Government and community leaders is needed for the current era.
- In addition, series of workshops, seminars and lectures of eminent workers and scientists on nutrition awareness may be organized for parents, teachers, students and health workers.

REFERENCES

[1] Bentley M.E., and Griffiths P.L.(2003) The burden of anemia among women in India. European J.of Clin.Nutr. (2003)57, p.52- 60.

[2] DLHS On RCH, India(2006) Nutritonal status of children and prevalence of anemia among children, adolescents and pregnant women-2002-2004. p.94- 95.

[3] Seetharam S.N., Khyrunnisa Begam and Sarawathi G.(1997) Prevalence of Nutritional Anemia in selected girls of Mysore city. Abstract publication souvenir, Home science curriculum perspectives and implications, organized by HSAI, Delhi Chapter, Lady Irwin college. Sikandara road, New Delhi-1, P-44.

[4] Shekhar A . (2005) Iron status of adolescents girls and its effect anphysical fitness the Indian journal of nutrition and dietetics October 2005:42 (10): 451-456. C.F. Studies on adolescent girls an analytical review. P-55 NMIPCCD new delhi-16.

[5] Shojaeizadeh D. A study on knowledge, attitude and practice of secondary school girls in Qazvin on iron deficiency anemia. Iranian J Public Health 2001;30(1):53–6

[6] The state of the world's children 2011 – Adolescence an age of opportunity. UNICEF.

APPENDIX - A

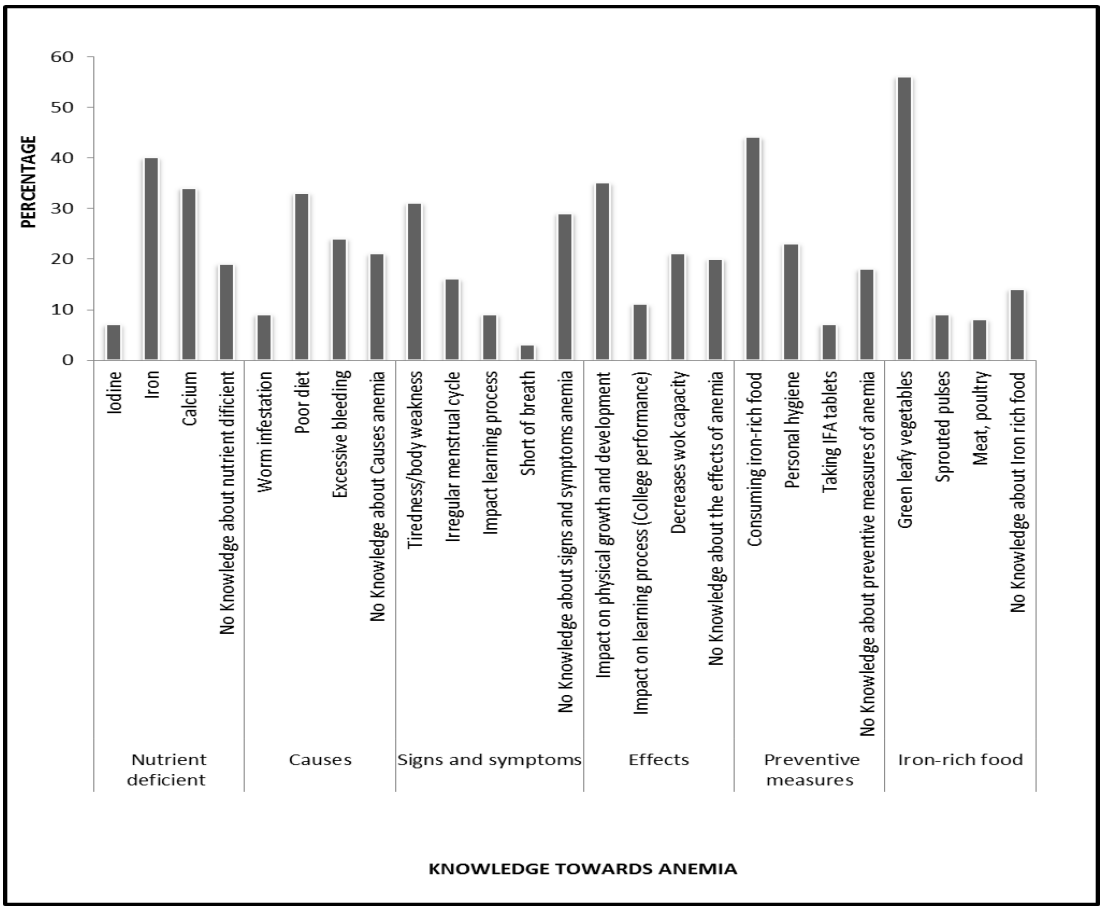


Fig. 1: Knowledge toward Anemia among College Girls

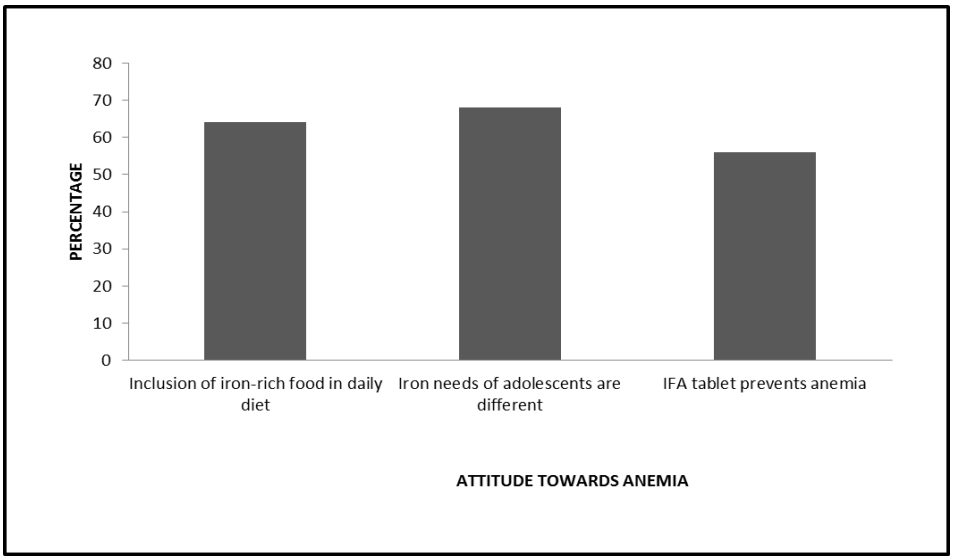


Fig. 2. Attitude toward Anemia among College Girls

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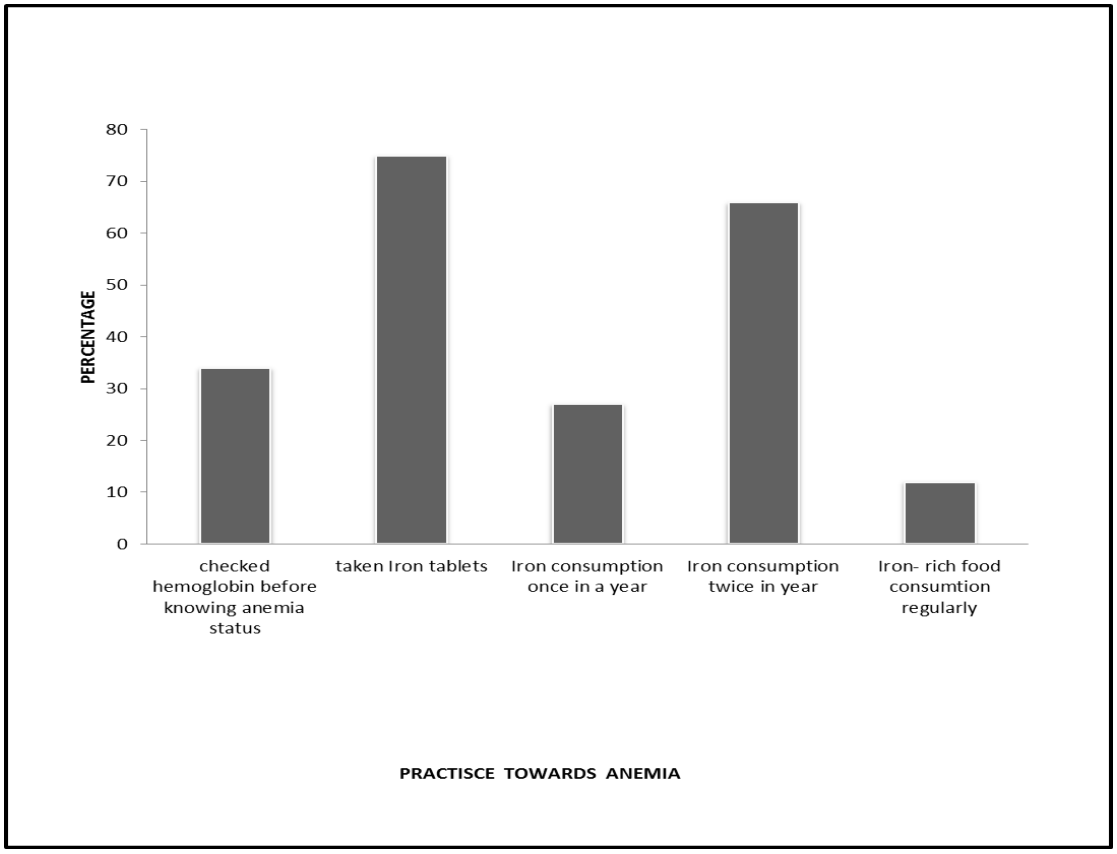

Fig. 3. Practice toward Anaemia among College Girls