ORIGINAL RESEARCH

KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT ANAEMIA AMONG ADOLESCENT GIRLS- STUDY FROM RURAL FIELD PRACTICE AREA OF IGIMS

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ABSTRACT

Introduction: Since anemia is the most prevalent disorder in India, it has got the significance to be studied and understood about. The higher incidence of low birth weight, prematurity, neonatal and infant mortality among children born to undernourished adolescent girls. It is necessary to make people aware of the causes, the preventive measures, and the importance of nutritional supplements, proper diet required preventing anemia.

Materials and Methodology: It is a cross-sectional study intended to be conducted among adolescent girls residing in the rural field practice area of IGIMS. All adolescent school going girls aged between 11–15 years will form the study population. After obtaining the written consent, students were interviewed with help of a predesigned, pretested, semi-structured questionnaire.

Results: In our study, out of 400 adolescent girls, 368 (92%) had heard about anemia. Out of 400 girls who had heard about anemia, only 148 (37%) had checked their haemoglobin to know their anemia status. Out of 400 girls who had heard about anemia, 51 (13%) were consuming iron-rich food daily and 117 (66%) once in a week.

Conclusion: Behavioural, physiological and socioeconomic limitations must be addressed efficiently. Spreading of the comprehensive nutritional knowledge regarding the diet and supplements should be made effectively.

Keywords: adolescent girls, anemia, KAP study, low birth weight babies.

INTRODUCTION

World health organization has defined 'adolescence' as a period ranging between 10 and 19 years. Adolescence stage in girls has been recognized as a period of transition from girlhood to womanhood. Adolescent girls contribute one-fifth of the female population worldwide. Anemia is a condition which adversely affects the cognitive performance, behavioural characteristics and physical growth of infants, pre-schoolers and school-aged children. It could also hamper the immune status and morbidity from infections of all age groups and the use of energy reservoirs by muscles. Therefore, the physical capacity and work performance of adolescents and adults of all age groups are significantly affected.[1] Among all the adolescents, anemia affects not only the current health status but can also have harmful effects in later stages of life. There will be higher incidence of low birth weight, prematurity, neonatal and infant mortality among children born to undernourished adolescent girls. Later on, these undernourished girls become anaemic and might produce low birth-weight babies.[2]during adolescence the need for iron increases from the preadolescent level of 0.7-0.9 mg Fe/day to 2.2 mg Fe/day both among adolescent boys and girls. This has increased iron requirement which is attributable to peak pubertal development mentioned by expansion of total blood volume, increase in lean body mass and the onset of menstruation in adolescent females.[3]The demand for iron in females continues to remain high after menarche due to menstrual blood loss where the iron need roughly averages about 20 mg of iron per month and it may also be as high as 58 mg in few individuals as well.[4]In order to reduce the burden of anemia health education, nutrition counselling, iron and folic acid supplementation, deworming, etc are some of the keys criteria that are thought to be addressed.

Anemia has its varied consequences. The direct effects are generally on growth and indirect effects are mostly impaired concentration, lack of attentiveness, poor memory and defective performance in the academics and reduced attendance in the schools. Menarche is delayed, immune system is affected which could possibly leads to many frequent episodes of infections. Increased foetal morbidity and mortality, low birth weight, perinatal risk, increased infant mortality and maternal mortality are some of the future consequences of anemia that has been present among the adolescent girls.[5] Although this study has been planned to point out the burden of anemia and to know the awareness of anemia among the rural adolescent group, it will also be very much helpful in drawing recommendations and rendering suggestions to assess and enhance the existing Anemia Control Program. Though this is reported to be the most prevalent condition across India, it has got the significance to be studied and understood about. It is necessary to make people aware of the causes, the preventive measures and the importance of nutritional supplements, proper diet that are required to prevent anemia. This study was carried out to know knowledge, attitude, and practice regarding anaemia among adolescent girls and to know treatment seeking behaviour regarding anaemia among adolescent girls.

MATERIALS AND METHODOLOGY

After obtaining prior permission from the institutional ethical committee, this study was carried out in the rural field practice area of IGIMS for the period of two months from 02 April to 02 June, 2022. It is a cross-sectional study intended to be conducted among adolescent girls residing in the rural field practice area of IGIMS. All adolescent school going girls aged between 11–15 years, who were enrolled as students in the government schools, will form the study population. After obtaining the written consent, students were interviewed with the help of a predesigned, pretested, semi-structured questionnaire.

Inclusion criteria include those adolescent school girls aged 11–15 years, who are the resident of rural field practice area of IGIMS and are willing to participate for the study. After seeking permissions from the government officials and principals of the schools for conducting the study, interview was conducted among the study subjects in order to evaluate the knowledge, attitude and practice toward anemia.

Sample size was determined using the following formula –

$$N=4Pq/l^2$$

According to NFHS-5, Prevalence of Anaemia among rural women aged 15-19 years is 65.4%[4]. Considering P= 65.4%, N=4×65.4×34.6/25=362.

Thus, the sample size was estimated to be 362. 10% non-response rate was added to this, making the sample size 398. This was rounded off to 400.

RESULTS

In our study, out of 400 adolescent girls, 368 (92%) had heard of anemia. The main source of information was school teachers (36%), followed by the doctor or other healthcare personnel (29%). Three hundred (75%) knew that anemia is a health problem. Out of 400 girls who had heard of anemia, 140(35%) did not know what happens in anemia and only 144 (36%) girls answered correctly that there is decrease in the haemoglobin level in anemia. Only 168 (42%) girls out of 400 told that anemia is due to deficiency of iron and 30 participants did not know the answer. One hundred thirty-two (33%) girls out of 400 told poor diet is the only cause for anemia and 64 (16%) answered anemia is due to multiple causes such as worm infestation, poor diet, and excessive flow during menstruation. Out of 400 girls, 124 (31%) told tiredness/body weakness is the only feature of anemia and 48 (12%) answered anemia manifests with multiple signs and symptoms. When we asked about the preventive measures against anemia, out of 400 girls, 184 (46%) told consumption of iron-rich food is the only protective measure and 36 (9%) answered multiple correct measures. Out of 400 girls, 232 (58%) told green leafy vegetables (GLVs) are the only source of iron-rich food and 48 (12%) girls answered sprouted pulses, GLVs, meat, and poultry all are rich sources of iron.

Out of 400 girls, 264 (66%) girls told that it's good to include GLVs in daily diet; 280 (70%) girls felt that Iron needs of adolescent girls are different from others; and 236 (59%) girls opined that taking iron and folic acid tablets prevents anemia.

Out of 400 girls who had heard about anemia, only 148 (37%) had checked their haemoglobin to know their anemia status. Out of 400 girls who had heard about anemia, 52 (13%) were consuming iron-rich food daily and 264 (66%) once in a week.

Table 1: Knowledge toward anemia among adolescent girls

S.No	Variables	Percentage
1	**Had heard about anemia**	92
2	**Major source of information**	
	School teacher	36
	Doctor/health professional	29
	Family members	18
	Media	14
	Friends/Neighbours	3
3	**Is Anemia is a health-related problem**	
	Yes	75
	No	25
4	**What happens in Anemia?**	
	Increased RBCs	25
	Decreased hemoglobin	34
	Increased hemoglobin	6
	Don't know	35
5	**Which nutrient is deficient in anemia?**	
	Iodine	6
	Iron	42
	Calcium	33
	Don't know	19
6	**Anemia – Main causative factors?**	
	Worm infestations	10
	Poor diet	33
	Excessive bleeding	24
	All three are correct	16
	Don't know	17
7	**Anemia –Major preventive measures?**	
	Consuming iron rich food	46
	Personal hygiene	25
	Under IFA tablets	9
	All are correct	9
	Don't know	11
8	**Best Iron rich food**	
	Green leafy vegetables	58
	Sprouted pulses	12
	Meat, poultry	8
	All are correct	10
	Don't know	12

Table 2: Attitude toward anemia among adolescent girls

S. No	Variables	Percentage
1	**Iron rich food in daily diet**	
	Yes	66
	No	34
2	**Iron requirement of adult's are different**	
	Yes	70
	No	26
	Don't know	4
3	**Do you use IFA tablet ?**	
	Yes	59
	No	25
	Don't know	16

Table 3: Practice toward anemia among adolescent girls

S. No	Variables	Percentage
1	**Have you checked Hb before knowing anaemic status?**	
	Yes	37
	No	63
2	**Frequency of iron-rich food consumption**	
	Daily	13
	4 – 5 times a week	6
	Two times a week	14
	Don't know	67

DISCUSSION

Among the 400 study samples, 92% of adolescent girls had heard of anemia through any of the sources available and 75% already knew that anemia is a health problem, 34% subjects answered correctly regarding the anemia that the quantity of haemoglobin decreases prudently. 42% subjects in our study told that anemia is due to deficiency of iron and this result was relatively greater than observation made in a study by Kotecha et al (12.1%).[6]inthis study, 12% subjects knew about various signs and symptoms of anemia. This is reportedly lower than the observations made in study by Kotecha et al[6] (44.2%) and Chakma et al[7] (38%). 46% subjects said that consumption of iron-rich food was the only preventive measure against anemia and 58% subjects told that GLVs were the only source of iron-rich food. These values deviate from the results obtained in a study conducted by Chakma et al[7]where 81.4% of the adolescent girls did not know that the anemia could possibly be prevented or treated. In this study, 55% of the subjects stated they will go to doctor for check up and take iron tablet if they had suffered from anemia-related symptoms. This finding is significantly lower than a study conducted by Chakma et al[7] (65%).

The mean knowledge score was 9.52 ± 3.91; attitude score was 2.26 ± 1.46and practice score was 1.63 ± 0.68and mean cumulative knowledge, attitude, and practice score was 13.5 ±

4.99. A study carried out by Shojaeizadeh[9]depicted that 57.3% had poor knowledge, 54.3% had unfavourable attitude and 44.5% did not perform appropriate behaviour to prevent anemia. On studying the results on knowledge regarding cause, consequences, prophylaxis and treatment of anemia, only one fourth of the study population felt that heavy blood loss during menstruation could possibly can be the etiological factor for developing anemia. Around 50% of the study population felt that anaemic school going kids have weakness, breathlessness and are more prone to various infectious diseases.

Around two third study populations felt that anaemics tend to have pale face, tongue, nails, eyes and decreased concentration in studies. One third of the study participants felt that anemia can be prevented by routine day-to-day exercise and good food and anemia can also be treated by iron tablets. Less than 10% of the study participants already knew about iron rich foods and less than 5% of them knew that coffee, tea and milk could possibly hamper iron absorption and vitamin-C which enhances iron absorption.

CONCLUSION

Many of the adolescent girls showcased good knowledge towards anemia but poor attitude and practice. Therefore, adolescent girl's knowledge alone is not sufficient to impact acceptable practices and attitudes. Behavioural, physiological and socioeconomic limitations must be addressed efficiently. Spreading of the comprehensive nutritional knowledge regarding the diet and supplements should be made effectively.

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