Original Article

Study to Assess the Knowledge Regarding Anaemia among School Going Adolescent Girls of Rural Meerut, Uttar Pradesh

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Abstract

Back ground: Adolescent is a period of peak growth for boys and girls. Food and nutrition needs proportionately higher during the growth spurt[2]. In country like India with varying social customs and common beliefs against female, there is high prevalence of malnutrition among girls. If anaemic adolescent girl became pregnant, it may increase both mortality and morbidity rate in both mother and infant i.e maternal mortality rate and infant mortality rate. **Material & Methods:** The present quasi-experimental study was conducted among school going adolescent girls of class 9th , 10th, 11th and 12th of Gurukul inter college, Panchali. Data was collected on predesigned semi structured questionnaire which included details of socio demographic variables like age, parent's education and other details about knowledge regarding anaemia, its causes and sources of iron.One week after the presentation again the knowledge of students was assessed on the same set of questionnaire**. Result:** 31% were of 15 yrs, 30% were of 16 yrs. Knowledge about anaemia before presentation was present in 76% students while it was 96% after presentation. 20% knows about the sources of iron. 60% of the study subject were aware of programme related to anaemia **Conclusion:** Despite the various measures taken by government of India to control anaemia in various groups the severity of nutritional anaemia continues to remain a public health issue of great magnitude.

Key words: *Knowledge, Anaemia, Adolescent, Iron*

Introduction

Nutritional anaemia is a global problem. Globally about 3.6 billion people are suffering from this. In India the prevalence of anaemia is about 23% in adult male, 40% in children, 55.8% in adolescent girls , 53% in adult female and 58% in pregnant mothers[1].Among adolescents, girls constitutes a more vulnerable group, particularly in developing countries. Adolescent is a period of peak growth for boys and girls. Food and nutrition needs proportionately higher during the growth spurt[2]. In country like India with varying social customs and common beliefs against female, there is high prevalence of malnutrition among girls. Adolescent mothers belonging to low socioeconomic strata, suffers more because of chronic malnutrition[3]. Anaemia not only affects the growth of adolescent girls but also affects attentiveness, memory and school performance. If anaemic adolescent girl became pregnant, it may increase both mortality and morbidity rate in both mother and infant i.e maternal mortality rate and infant mortality rate[4]. The cycle of anaemia is vicious cycle as anaemia in adolescent age if not corrected continue to married women

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than to pregnancy period and then to child also and so on. Apart from this it attributes to high MMR, high incidence of low birth weight babies and high perinatal mortalities[5]. Despite of many efforts taken by government anaemia among adolescent girls is still a problem. The problem will continue unless and until the adolescent girls are aware of anaemia, its causes, prevention and treatment. Keeping this in mind the present study was conducted to assess the level of knowledge regarding anaemia among adolescent girls and percent change in their knowledge one week after IEC activity.

Aim and Objectives:

1. To assess the level of knowledge regarding various aspects of anaemia among adolescent girls of rural area

2. To assess the percent change in their knowledge one week after IEC activity.

Material and Methods

Study setting- Gurukul Inter College, Panchli

Study population- Adolescent girls of class 9th -12th of Gurukul Inter College, Panchli, Meerut

Study design- Quasi experimental study

Sample size- 100 adolescent girls

Sampling technique- Purposive sampling

Duration of study- 3 month (Oct - Dec)

Inclusion criteria- students present on the day of data collection and willing to participate in study

Exclusion criteria- student not present on the day of data collection and not willing to participate in study

Dependant variable- Knowledge

Independent variable- age, father's occupation, class

Research tool- Self -made questionnaire

Data analysis- MS excel, SPSS

Methodology

The present quasi-experimental study was conducted among school going adolescent girls of class 9th, 10th, 11th and 12th of Gurukul International School, Panchli, Meerut. Prior permission was taken from the concerned authority and arrangement was made to gather the students at pre decided date, time and place. 100 girls from 9th, 10th, 11th and 12th class were randomly selected after their assembly get over. The purpose and objective of the study was explained to the students prior to the data collection and they were assured about the confidentiality of the data. Data was collected on predesigned semi structured questionnaire which included details of socio demographic variables like age, parent's education and other details about knowledge related to anaemia. Before filling the questionnaire, questions were explained to the students so that they could understand the questionnaire completely and could answer properly. Completion of questionnaire was assured at the time of collection. After collection of filled questionnaire a Power point presentation along with videos regarding various aspects of anaemia was given to the students. One week after the presentation again the knowledge of students regarding anaemia was assessed on the same set of questionnaire. The data was entered and analysed on SPSS.

Results

In present study which was conducted on 100 adolescent girls of rural area 23% girls were of 14yrs, 31% were of 15 yrs, 30% were of 16 yrs, 12%were of 17 yrs and 4% were of 18 years i.e majority (61%) were of age group 15 & 16 years.

Table 1: Knowledge about Anaemia

Knowledge about anaemia	Pre	Post	% change	p-value
1. Heard about anaemia Yes NO	 76 24	 96 4	↑20%	.0000
2. Causes of anaemia Yes NO	 14 86	 38 62	↑24%	.0001
3. Effect of anaemia on body Yes NO	 61 39	 83 17	↑22%	.005
4. Complications of anaemia Yes NO	 26 74	 34 66	↑8%	.217
5. Normal haemoglobin Yes NO	 27 73	 78 22	↑51%	.000

Table 1 shows that in our study group, knowledge about anaemia before presentation was present in 76% students while it was 96% after presentation. There was increase of about 20% which was found to be statistically significant. Knowledge regarding various causes of anaemia before & after presentation was 14% and 38% respectively. There was increase of about 20% which was found to be statistically significant. There was 22% and 51% increase in knowledge regarding effect of anaemia on body and normal haemoglobin level which was found to be statistically significant.

Table 2: Knowledge regarding prevention of anaemia

Knowledge regarding prevention of anaemia	Pre	Post	% change	p- value
1. Is anaemia preventable Yes NO	 44 56	 59 41	↑ 15%	.023
2. Richest source of Iron Yes NO	 20 80	 82 18	↑ 62%	.0000
3. Daily requirement of Iron Yes NO	 39 61	 74 26	↑ 35%	.000
4. Food which increases iron absorption Yes NO	 68 32	 94 06	↑ 26%	.000

Table 2 shows 15%, 62%, 35% and 26% increase in knowledge regarding preventable nature of anaemia, sources of iron, daily requirement of iron and food which increases iron absorption. Difference was found to be statistically significant. One of the important finding of this table is that among adolescent girls only 20% knows about the sources of iron.

Table 3: knowledge regarding government role in anaemia

Knowledge	Pre	Post	% change	p-value
1. Are there government programmes for anaemia Yes NO	 60 40	 89 11	↑ 29%	.0000
2. Are their tablets under govt. programme for prevention of anaemia Yes NO	 19 81	 89 11	↑ 70%	.000

Table 3 shows that 60% of the study subject were aware of programme related to anaemia and only 19% were aware of availability of iron tablets under programme and there was 29% and 70% increase in knowledge after presentation. The difference was found to be statistically significant.

Discussion

Our study was conducted on 100 adolescent girls of rural area to assess knowledge about anaemia and iron rich food before and after intervention. Similar study was conducted by Verma et al[6] in Gandhi Nagar Gujarat. In our study we found that 76% of the students have heard about anaemia and only 14% were aware of causes of anaemia. Hafiz et al[7] in their study showed that 25% of adolescent females had knowledge about anaemia. In our study only 20% of the adolescent girls had knowledge about sources about food rich in iron, where as in a study conducted by Gupta nad Kochar[8] 75% of the girls knew green leafy vegetables as a good source of iron. In our study 60% of the girls had knowledge regarding government programme of anaemia but only 19% knew about anaemia tablet availability under programme.

Conclusion

The study concluded that the knowledge regarding anaemia has increased significantly among adolescent girls. With inadequate medical care, nutritional support, educational opportunities a girl child grows an undernourished and anaemic adolescent girl. Early marriage, early pregnancy and inadequate inter

pregnancy interval further perpetuates a vicious cycle of under-nutrition and morbidities with irreversible and intergenerational effect on cognitive and physical development. So to overcome all this there is need to educated adolescent girls about anaemia and other nutritional needs through means like pamphlets, health talks, advertisements and awareness programs.

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