



Assess the prevalence of anemia among school going children in villages of Nellore, Andhra Pradesh

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Abstract

Anemia is globally troublesome problem in developing and developed countries too. The consequences of undiagnosed and untreated anemia have severe effect on health. The present cross sectional study was conducted among 60 school going children in selected villages at Nellore district.- Buja Buja Nellore, Kakatur- 1, Kakatur- 2, Sarvepalli. Samples were selected by simple random method with lottery technique. 32 male children and 28 female children were included in the study. Data was collected by using socio demographic variables and Hb estimation by sahli's method. Parental informed consent was obtained. Data was analyzed by using descriptive and inferential statistics. The study findings revealed that out of 60 children 10.7 % female children's are suffering with severe anemia followed by 28.7% female children has mild anemia and 21.4% had moderate level of anemia, whereas in male children's 15.6% are having mild anemia and 15.6% had moderate anemia and none of them had severe anemia. The study concluded that there is a need to educate the family members regarding the preventive and treatment strategies of anemia.

Keywords: prevalence, anemia, school going children

Introduction

Anemia is defined as a low level of hemoglobin in the blood, as evidenced by a reduced quality or quantity of red blood cells. It has serious negative consequences including increased mortality in women and children, decreased capacity to learn, and decreased productivity in all individuals. It's devastating effects on health and physical and mental productivity affect quality of life and translate into significant economic losses for individuals and for countries with high anemia prevalence. Recent statistics has shown that the most highly affected population groups in developing countries are pregnant women 56%, school age children 53%, non-pregnant women (44%), and preschool children 42%. Early identification can minimize the effects of anemia among school going children.

Objectives

To assess the prevalence of anemia

To find out the association between the level of anemia and socio demographic variables of school going children.

Methodology

The present cross sectional descriptive study was conducted among 60 school going children. Study was conducted in selected villages (urban and rural) at Nellore district. Buja Buja Nellore, Kakatur- 1, Kakatur- 2, Sarvepalli. The population of the study was children age of 10 – 15 years. Subjects were selected by simple random technique by lottery method. Sample size of the study was 60 Children (32 boys and 28 girls).

Description of the tool

The tool is divided into two parts.

Part I: Socio-demographic variables and observational check list

- Demographic data such as age, sex, education, birth history etc.

Part II: Biochemical profile

- Estimation of hemoglobin by sahli's method
- Estimation of serum ferritin level

Data collection procedure

After obtaining permission from ethical committee of Narayana Medical College Hospital. Permission to conduct the study was obtained from concern authority of the schools. 60 students were selected by using simple random sampling technique List of children's was selected from the admission register. Consent was obtained from parents. The tool was administered to the parents. Haemoglobin was checked through sahli's method and 2 ml blood was collected for assessing the serum ferritin levels. Nearly one hour was spent for collecting data from each sample. Health education was given to parents and children's regarding iron rich diet. 5 samples was completed per day. Confidentiality of the data was maintained.

Plan for data analysis

The data was analyzed in the terms of objectives of the study by using descriptive and inferential statistical method.

The descriptive data was assessed by using mean, median, standard deviation. Inferential statistics was done by using

chi-square for identifying the association between the haemoglobin and socio demographic variables.

Results Section –I

Table 1: Socio demographic variables of school going children

Sl.no	Socio demographic data	Frequency	Percentage
1.	Age		
	a)9-12yrs	28	46.77%
	b)13-15yrs	31	53.3%
	c)16-18yrs	1	1.66%
2.	Sex		
	a)male	32	53.3%
	b)female	28	46.7%
3.	Birth history		
	a)preterm	1	1.67%
	b)term	57	95%
	c)post term	2	3.33%
4.	Birth weight		
	a)Low birth weight	4	5.8%
	b)Very low birth weight	2	3.33%
	c)Normal	54	90%
5.	History of frequent infection		
	a)No	43	71.67%
	b)Once in 6 month	3	5%
	c)Once in2-6 month	4	6.67%
	d) Once in a year	2	3.33%
	e)Very frequently	8	13.33%
6.	Duration of breast feeding		
	a)1-4 month	2	3.33%
	b)1-6 month	8	13.33%
	c)1-8 month	8	13.33%
	d)1-12 month	42	70.00%
7.	Whether your child has poor performance in school activities		
	a)Yes	15	25.00%
	b)No	45	75%
8.	The child performs minimal play activities		
	a)yes	15	25.00%
	b)No	45	75%
9.	Do your child get tired /restlessness?		
	a)yes	8	13.3%
	b)No	52	86.67%
10.	Whether your child eating any un edible substance?		
	a)No	54	90%
	b) chalk pieces	3	5%
	c)Ash	1	1.66%
	d)others	2	3.33%
11.	Presence of any gastro intestinal disturbance/mal absorption syndrome		
	a) No	38	63.33%
	b)Abdominal pain	18	30.00%
	c)Nausea	1	1.66%
	d)Anorexia	3	5%
12.	Whether your child has /had worm infestation		
	a)No	55	91.6%
	b)Once in 6 months	3	5%
	c)2-3 times in 6 months	1	1.66%
	d)Once in a year	1	1.66%

Section-II**Table 2:** Frequency and percentage distribution of anemia among school going children

Sex	Normal		Mild		Moderate		Severe	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Male	22	68.5	5	15.6	5	15.6	0	0
Female	11	39.28	6	21.4	8	28.57	3	10.7

Section –III**Table 3:** Serum ferritin level among children

S. No	Normal Ferritin	No Of Children Under Normal
1	7-140 ng/ml	60

Section IV: association between level of anemia and socio demographic variables of school going children

The socio demographic variables like age, birth history, birth weight, history of infection, whether child has poor performance in school, child get frequent infections has shown significant association with the level of haemoglobin. Remaining variables has shown non significant association with level of haemoglobin.

Conclusion

The study concluded that majority of the female childrens are suffering from anemia than male children. Hence there is a necessity to bring awareness among the general population regarding anemia and complications of untreated anemia.

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