

# Effectiveness of Video Teaching Programme on Knowledge about Anaemia among Countryside Children with Anaemia

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## Abstract

**Introduction:** Anaemia is a very common problem in paediatric age group in many developing countries with an estimated prevalence of 42.50% of the World's children. Schoolchildren constitute 22.20% of total population in India and they are more vulnerable to this disease due to their rapid growth need of high requirement of iron.

**Method:** Quantitative experimental approach with pre-test post-test design was adopted for the study. The main study was conducted among 150 Countryside children, 80 from Pallimaghal high school and 70 from Government H.S.School Ranir Bazar. The samples were selected by purposive sampling technique. The tools used were format for History collection and Physical examination, demographic Performa of the sample, knowledge questionnaire regarding anemia and Video teaching Programme on Anaemia.

**Results:** This study reveals that majority of Countryside children were anaemic. 65.2 percentage of Countryside children had moderately adequate knowledge regarding anaemia before the Video teaching programme and 78.2% had adequate knowledge regarding anaemia after the Video teaching programme. The analysis of the data showed that the pre-test knowledge scores of the Countryside children are significantly higher than that of post test scores ( $t=12.576$ ,  $p<0.00$ ). This emphasizes that the structured Video Teaching programme was effective in improving the knowledge regarding anaemia. Further, there was no significant association between the pretest knowledge scores and selected demographic variables.

**Conclusion:** The study concluded that the structured Video teaching programme was effective in improving the knowledge of Countryside children regarding anaemia.

**Keywords:** *Anaemia, knowledge, effectiveness, Countryside children, structured video teaching programme.*

## Introduction

Adolescence is a period of transition between childhood and adulthood and it is a significant period of human growth and maturation<sup>1</sup>. The health of adolescents attracted global attention in the past decade. Adolescence being rapid growth period is at risk of developing nutritional deficiencies including anemia<sup>2</sup>. In India adolescent, constitute approximately 21% of the population. Anaemia gains increased importance among tribal who are already disadvantaged socioeconomically and face a slow pace of growth. Generally speaking by the term "tribe" means, a group of people who that live at a particular place from time immemorial. Tribals were indigenous people. Original or native inhabitants of a country known as indigenous people. Tribal groups constitute about 8.2 % of the total population in India (Indian Government Census, 2001). According to government statistics, tribes can be

found in approximately 461 communities with almost 92 % of them residing in rural areas, mostly in remote underserved forest regions with little or no basic civic amenities like transport, roads, markets, health care, safe drinking water or sanitation. Tribal communities therefore lag behind other communities with respect to attainment of income, education health and other requisites for good community nutrition. of the 86 million tribals who are 8.2 percent of the population, 80 percent live in the Middle India belt of Andhra Pradesh, Orissa, Jharkhand, Chhattisgarh, Madhya Pradesh, Northern Maharashtra and Southern Gujarat. Around 12 percent or 10.2 millions live in the Northeast. The rest are spread over the remaining States. Scheduled tribes are distributed throughout the country except Pondicherry, Haryana, Punjab, Chandigarh, and Delhi<sup>7, 8</sup>.

Tribals were found in almost all the states of country. Currently there are between 258 and 540 scheduled tribe

communities exists in India. India has the second largest concentration of tribal population in the world. Tribal population of 67.8 million distributed in different states and union territories. Tribals are characterized by a distinctive culture, primitive traits, and socio-economic backwardness<sup>3</sup>. Anemia is a very common problem in pediatric age group in many developing countries with an estimated prevalence of 43% of the World's children. School children constitute 20.25% of total population in India and they are more vulnerable to this disease due to their rapid growth need of high iron<sup>9,11</sup>. Anemia is a condition in which the number of red blood cells or the amount of hemoglobin is low. Red blood cells contain hemoglobin protein that it enables them to carry oxygen from the lungs and deliver it to all parts of the body.<sup>4</sup> Iron deficiency is the most common nutritional disorder in the developing world and the most common cause of nutritional anemia in young children and women of reproductive age<sup>8,12</sup>.

### Objectives of the Study

1. Identify Countryside children with anaemia based on their measured haemoglobin level
2. Assess the knowledge level of Countryside children regarding anaemia.
3. Determine the effectiveness of structured Video teaching program on knowledge of Countryside children regarding anaemia.
4. Find out the association between pre-test knowledge score and selected demographic variables like age, sex, education, father's job, mother's job and monthly income per month.

### Material and Method

**Research Approach:** The present study adopted a quantitative experimental approach.

### Research Design

The research design selected for this study was Pre experimental one group pre-test, post-test design.

### Variables

Independent variable was structure video teaching programme programme.

Dependent variable was the knowledge of tribal adolescent children regarding iron deficiency anaemia.

The demographic variables considered in this study were age, sex, educational status, family structure, father's job, mother's job, and monthly income per month.

**Setting of the Study:** Selected Schools of Kayurpur and Ranir bazar in Tripura West .

**Population:** All countryside boys and girls studying in selected schools.

### Sample

All the countryside boys and girls studying in selected schools who met the inclusion criteria.

### Sample Size

150 tribal adolescent children.

### Sampling Technique

Purposive sampling technique

### Inclusion Criteria:

- Countryside children studying in selected schools in Tripura West
- Countryside children in the age group of 12-16years
- Countryside children present in the school during the days of data collection

**Exclusion Criteria:** Countryside children who are not willing to participate in the study

### Description of the Tool:

Tool- 1: Demographic Proforma of the sample.

Tool-2: Structured knowledge questionnaire on anaemia.

Tool-3: Format for History and Physical Examination

**Data collection process:** Two schools were randomly selected. After obtaining the official permission from the concerned authorities and informed consent from the samples and their parents. The haemoglobin estimation was done by using Sali's haemoglobin method. A pre-test knowledge questionnaire was then distributed among the adolescent children and was collected back after 30 minutes. A 45minutes long structured teaching programme regarding anaemia prepared by the researcher with the help of the guide, was given to all adolescent children. Teaching was given using

lecture cum demonstration method. During the teaching programme, the researcher demonstrated the method of preparing raggi porridge. Posttest was conducted on the seventh day after pre-test by administering using the same questionnaire.

**Plan for Data Analysis:** Descriptive and inferential statistics used for data analysis, using SPSS version 19.

**Descriptive statistic method:** The sample characteristics would be analysed using method like frequency and percentage and will be depicted in frequency tables and graphs. The mean score of the pre-tests and posttests conducted was calculated.

**Inferential statistic method:** The pre test scores would be compared with the post test scores using paired t-test.

The association between the pre test scores and the selected demographic

Variables would be analysed using Chi-Square test.

### Findings

#### Section 1: Description of demographic characteristics

**Table 1: Frequency and percentage distribution of demographic variables of children**

N=150

Variables	Numbers	Percentage
<b>Age</b>		
12 yrs	32	21.33
13 yrs	38	25.33
14 yrs	32	21.33
15 yrs	27	18.00
16 yrs	21	14.00
Total	150	100

<b>Gender</b>		
Males	90	60
Females	60	40
<b>Residence</b>		
Urban	00	00
Rural	150	100
<b>Type of school</b>		
Govt. school	90	60
Private school	60	40

Data presented in the table 1 shows that majority of the adolescent children belonged to the age group of 13-14 years. Most of the samples were females, 46.6% of samples were in of 8<sup>th</sup> standard and majority of the sample were males 90(60%). All children’s were residing at rural areas. Majority of them studying in govt school 90(60%).

### Section 2

**Table 2: Analysis of Anaemic history and Physical examination**

Variable	Number	Percentage
<b>Anaemic history</b>		
Severe	10	5.66
Moderate	60	40
Mild	80	54.33
Total	150	100
<b>Physical examination</b>		
Severe	10	5.66
Moderate	60	40
Mild	80	54.33
Total	150	100

Table 11 shows the severity of rural tribal student’s anaemia status according to their Anemic history and physical examination. i.e 10(5.66%) of children severely affected anaemia, 60(40%) of children were affected moderately and 80(54.33%) were affected mild anaemia.

**Table 3: Comparison of pre-test and post-test knowledge scores of tribal children**

Anaemia	Pre-test score Mean±S.D	Post test score Mean ±S.D	T value	P value
Causes (4)	1.74 ±0.747	3.27± 0.737	14.863	<0.001
Risk factor(10)	2.90 ±1.202	8.54 ±1.086	35.996	<0.001
Diagnose and Treatment(4)	2.18 ±0.936	3.40 ± 0.711	11.951	<0.001
Prevention(7)	3.59± 1.322	5.95 ±0.892	15.995	<0.001
Health education(5)	1.85± 0.968	3.74 ±1.001	14.262	<0.001
Total sub score	12.19 ±2.773	24.90± 2.013	42.234	

As shown in table: the post-test knowledge score  $24.90 \pm 2.013$  was higher than pre-test knowledge score  $12.19 \pm 2.773$  with a mean difference of 12. 710 thus it can be inferred the difference obtained between pre-test and post-test was true different not by chance. There was marked gain in knowledge in post-test than pre test. The research was accepted indicating that the video teaching programme was an effective method for improving knowledge on anemia among countryside children.

### Discussion

The present study revealed that 61.2% of adolescent children were anaemic. 22.4% of the adolescent girls were moderate anaemia. 20% adolescent boys and 18.8% girls were mild anaemia. 38.8 percentage of children are not anaemic. Similar studies have done among adolescent girls in Tribal area of Visakhapatnam district. The result showed that, About 88.9% of adolescent girls were anemic and among them 17.8% were severely anaemic. Highest prevalence was seen in the age group of 12-13 years and 14-15 years of age group that is 85% and 86.5% respectively<sup>5</sup>.

In the present study, 61.1% of adolescent children in pre-test had moderately adequate knowledge, where as in post-test majority 76.6% of the adolescent children exhibited adequate knowledge after the structured teaching programme. Similar studies done in Karnataka, Hassan and Bangalore reviewed by the researcher had shown the same results<sup>46</sup>. Another study was conducted in Belgaum among adolescent girls, the result revealed that 100% of adolescent girls in pre-test had average knowledge, where as in post-test majority 73.33% of the adolescent girls had good knowledge<sup>6</sup>.

The present study revealed that there is no association between the knowledge level of adolescent children and the selected demographic variables such as age, sex, education status, father's job mother's job and monthly income. A similar study conducted to determine the prevalence of anemia in adolescent Nepalese girls in a semi urban setting, concluded that the prevalence of anemia was not related to girls age, body mass index, menarcheal status, and socio-demographic factors including parental education or occupation<sup>7</sup>.

### Conclusion

The study concluded that 61.2% of sample were anaemic. More than 61.1% of the adolescent children had a moderately adequate knowledge regarding

anaemia before the teaching programme and majority (76.6%) of the adolescent children's knowledge become adequate after the structured video teaching programme. In addition, there was no association between the knowledge level and selected demographic variables such as age, sex, education, type of family, father's job, mother's job and monthly income.

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**Ethical Clearance:** Ethical clearance for conducting the study was obtained from the research committee of Tripurasundari College of Nursing, Tulakuna, Tripura west. The permission for the study was obtained from schools Head masters of tribal school. Informed consent was taken from the participants.

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