



ORIGINAL RESEARCH PAPER

Nursing

prevalence of anemia and to evaluate the effectiveness of planned teaching programme (PTP) on prevention and control of anemia among adolescent school children in terms of knowledge and practice

KEY WORDS:

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ABSTRACT

A study to determine the prevalence of anemia and to evaluate the effectiveness of planned teaching programme (PTP) on prevention and control of anaemia among adolescent school children in terms of knowledge and practice in selected Government school of Rajasthan. The main objectives of the study were: (1) To develop a planned teaching programme on prevention and control of anemia for adolescent school children. (2) To determine the prevalence of anemia among adolescent school children studying in Govt. school of Rajasthan. The conceptual framework adopted for the study was based on Orem's self-care Model. A descriptive survey and evaluative research approach with one group pre-test post-test design was used in the study. The study was conducted in Govt. High School, Abu Road, Rajasthan. The population consisted of adolescent school children studying in IXth class of Govt. High School of Rajasthan. Multistage sampling technique was used to select the sample of 60 anaemic adolescent (both Boys and Girls) school children. A haemoglobinometer was used to measure the Hb level and structured knowledge and practice questionnaire were developed and utilized for data collection.

INTRODUCTION

Anaemia is a global public health problem affecting both developing and developed countries with major consequences for human health as well as social and economic development. It occurs at all stages of the life cycle, but is more prevalent in pregnant women and young children. In 2002, iron deficiency anaemia (IDA) was considered to be among the most important contributing factors to the global burden of disease.

Iron deficiency anemia is widespread among all segments of population. Around 30 percent of the world's population is estimated to be suffering from the deficiency anemia with the highest prevalence rates being seen in developing countries. Two-thirds of children and women of child bearing age in most developing countries were estimated to suffer from iron deficiency anemia.

India has one of the fastest growing youth populations in the world, with an estimated 190 million adolescents. Girls below 19 years of age comprise one quarter of India's rapidly growing population. The majority is out of school and has limited choices available for the future. Girls are caught in the cycle of early marriage, repeated pregnancy and poverty.

Adolescence in India goes hand in hand with iron-deficiency anaemia, medically known as IDA. While 56 per cent of adolescent girls are anaemic, boys too are falling prey to the disease. Around 30 per cent of adolescent boys are suffering from anaemia.

Although both adolescent boys and girls are affected by iron deficiency anaemia, the girls for biological reasons have a higher risk of suffering from iron deficiency. Women and girls need more iron than men because of menstruation, pregnancy, lactation and other demands on their body's iron supply. Insufficient iron in the diet leads to anaemia.

NEED OF THE STUDY

Adolescence is a time of major physical, cognitive and psychological growth and development. The blossoming of adolescence in each generation is a fascinating sight, predictable and repetitive yet none the less enchanting. The hallmark of adolescent years is change. There exists a general feeling in the society that adolescent years are normally free from major health problems. On the contrary it is a crucial period because an adolescent girl is still a developing child.

Anaemia is the most common haematologic abnormality of adolescence. The adolescent's need for iron increases, because of changes in lean body mass, expanded blood volume, increased respiratory enzymes and onset of menses in females.

If the iron deficiency is prolonged, the function of heart is also affected gradually, because of an excessive oxygen demand. It will

increase the extra workload of the heart, so it can produce myocardial infarction and angina in the later years. Complications of iron deficiency anemia should be prevented strictly, to create a healthy human being.

In Indian situation, there is a limited provision of school health nurse. Hence the investigator felt the great need for screening adolescents for anaemia. This can even sensitize school authorities who can further take the action for improvement of school health services.

India was among the fastest developing countries to have taken up the National **Anaemia Prophylaxis Programme (NAPP)** in 1970 to prevent anemia among women and children through distribution of iron and folate tablets. However due to various reasons like irregular supply chain and poor compliance, the programme has not made an appreciable dent in prevention of anemia. Hence it prompts us to take other alternatives.

STATEMENT OF THE PROBLEM

A study to determine the prevalence of anemia and to evaluate the effectiveness of planned teaching programme (PTP) on prevention and control of anemia among adolescent school children in terms of knowledge and practice in selected Government school of Rajasthan.

OBJECTIVES OF THE STUDY

1. To develop a planned teaching programme (PTP) on prevention and control of anemia for adolescent school children.
2. To determine the prevalence of anemia among adolescent school children studying in Govt. school of Rajasthan.
3. To assess the knowledge of adolescent school children before and after the administration of planned teaching programme (PTP) on prevention & control of anemia.
4. To assess the practice of adolescent school children before and after the administration of planned teaching programme (PTP) on prevention & control of anemia.
5. To determine the relationship between post-test knowledge and practices of adolescent school children regarding prevention and control of anemia.

HYPOTHESIS

H₁: The mean post-test knowledge scores of adolescent school children regarding prevention and control of anemia will be significantly higher than their mean pre-test knowledge scores as evident from structured knowledge questionnaire at 0.05 level of significance.

H₂: The mean post-test practice scores of adolescent school children regarding prevention and control of anemia will be significantly higher than their mean pre-test practice scores as evident from structured practice questionnaire at 0.05 level of significance.

H₃: There will be a significant relationship between post-test knowledge and practice scores of adolescent school children regarding prevention and control of anemia as evident from a structured knowledge and practice questionnaire at 0.05 level of significance.

RESEARCH METHODOLOGY

Research approach

An evaluative research approach was to carried out the study.

Research Design:

The research design selected for the study was pre-experimental one group pre-test and post-test design.

Variables under the study

Independent variable – Planning teaching programme for adolescent students regarding prevention and control of Anemia.

Dependent variable – Hb level, Knowledge and practice regarding prevent and control of Anemia among adolescent school students.

Setting for the study:

The present study was conducted in selected Government school of Rajasthan.

Population:

In the present study the target population were adolescent school children (both boys and girls) studying in class IX of selected school of Rajasthan.

Sample:

The samples of the study were selected adolescent school children (boys and girls) of class IX from selected Govt. schools of Rajasthan.

Sampling technique:

Multi stage sampling technique method.

Sample size:

Sample size consists of 100 adolescent school children both boys and girls.

Criteria for selection of sample:

- Adolescent school children of IXth class.
- Adolescent school children who were willing to participate.

Description of the tool:

- Part -I: Demographic data comprised of 15 items.
- Part –II: Knowledge test comprised of 35 items.
- Part –III: Practice test comprised of 15 items.

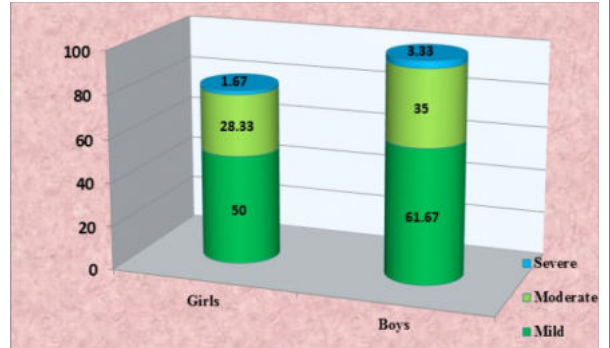
Data analysis:

The collected data was analyzed by using both descriptive statistics and inferential statistics.

Major findings:

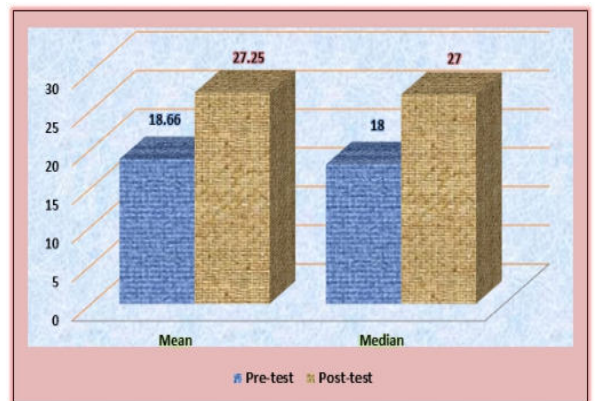
- Majority 60% of the adolescent school children were anaemic.
- Maximum 37(61.67%) of them lived in joint families.
- Majority 50(83.3%) of the adolescent school children were vegetarians.
- Among female adolescent majority 33(68.75%) had started their menstruation at the age of 12-13 years.
- Maximum 23(47.92%) of them had their menstrual cycle between 3-5 days.
- Maximum 22(45.83%) of the female adolescent school children had excessive flow of menstruation.

FINDINGS RELATED TO PREVALENCE OF ANAEMIA



The data indicates that majority (61.67%) of adolescents had mild anaemia and 35% of them had moderate anaemia. It also indicated that (3.33%) of adolescents had severe anaemia.

FINDINGS RELATED TO THE PRE-TEST KNOWLEDGE AND POST-TEST KNOWLEDGE SCORES OF ADOLESCENT SCHOOL CHILDREN REGARDING PREVENTION AND CONTROL OF ANAEMIA



The bar diagram showed the distribution of knowledge scores of adolescent school children in the pre-test and post-test. The mean post-test knowledge score (27.25) of adolescent school children was higher than their mean pre-test knowledge score (18.66) indicating increase in the knowledge of adolescent school children.

FINDINGS RELATED TO THE PRE-TEST AND POST-TEST PRACTICE SCORES OF ADOLESCENT SCHOOL CHILDREN REGARDING PREVENTION AND CONTROL OF ANAEMIA

Table -1

Mean, median and standard deviation of pre-test and post test practice scores of adolescent school children N=60

Practice scores	Mean	Median	Standard deviation
Pre-test	7.75	7	2.18
Post-test	12.08	12	1.30

*Maximum score=15

The data presented in Table-1 shows that the mean post test practice scores (12.08) of adolescent school children was higher than the mean post-test practice scores (7.75) which suggested the effectiveness of planned teaching programme (PTP) on prevention and control of anaemia.

The findings also show that the standard deviation of post test practice score (1.30) was less than the standard deviation of pre-test practice score (2.18). This indicates that the post-test practices scores were more homogeneous than the standard deviation of pre-test practice scores. The pre-test practice score was with a mean of 7.75 and median 7. The post-test had a mean of 12.08 and median 12.

Table-2
Mean, Mean difference, Standard deviation of difference, Standard error of mean difference, and 't' value of pre-test and post-test practice scores of adolescent school children

N=60

Practice	Mean	Mean D	SDD	SE(MD)	't' Value
PRE TEST	7.75	4.33	2.16	0.28	15.46*
POST TEST	12.08				

df(58), t=2.00, P< 0.05 level of significance *Significance at 0.05 level

The data presented in Table-2 shows that mean post test practice score (12.08) was significantly higher than the mean pre-test practice scores (7.75) suggesting that the planned teaching programme (PTP) was effective in increasing the practice scores.

The obtained mean difference (4.33) was found to be statistically significant at 0.05 level of significance as evident from the 't' value of (15.46) for df (58) at 0.05 level of significance.

CONCLUSION

On the basis of findings of the study the following conclusions were drawn:

1. Deficit in knowledge regarding prevention and control of anaemia existed in all the content area in varying degree.
2. There was lack of correct practice regarding prevention and control of anaemia among adolescent school children.
3. The planned teaching programmed was found to be effective in increasing the knowledge and practices of adolescent regarding prevention and control of anaemia among adolescent school children.
4. There was a significant positive correlation between post-test knowledge scores and practice scores. Thus the PTP was effective in terms of enhancing knowledge as well as practice of adolescent school children regarding prevention and control of anaemia.

DISCUSSIONS

The findings of the present study revealed that high prevalence of anaemia among among adolescents. More than half (60%) of the total adolescents were anaemic. The findings of the study are to some extent consistent with the study done by Verma, et al. (1998) had also reported more than half (51.5%) of the children in the urban school of Punjab had anaemia.

The findings of the present study also revealed that there were significant gain in knowledge and practice of adolescent school children after the administration of planned teaching programme (PTP), which showed the effectiveness of PTP in increasing the knowledge and developing correct practice towards prevention and control of anaemia. The findings of the study are to some extent consistent with the study done by Kala K 2010 in her study revealed that structured teaching program was found to be effective in improving the knowledge and attitude of adolescent girls.

Thus the study suggested that there is need to have survey on regular basis to assess the prevalence of anaemia and measures should be taken to prevent adolescent school children from iron deficiency disease.

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