



ASSESS THE PREVALENCE AND KNOWLEDGE OF ADOLESCENT GIRLS ON PREVENTION AND CONTROL OF ANEMIA: A STUDY

Ms. S. Ruthukumari

Community Health Officer, A Narayanapuram village, Anantapururamu ,A.P. India

Abstract

Adolescence more broadly refers to the phase of human development which encompasses the transition from childhood to adulthood. In females, adolescence marks the beginning of the menstrual cycle or reproduction. Girls' iron requirements increase dramatically during adolescence which make adolescent girls more susceptible to anaemia. Early detection of Anaemia can help prevent complications that impacts on physical, psychosocial wellbeing and development. The main objective of the study was to Assess the Prevalence and knowledge Of Adolescent Girls on prevention and control of Anaemia at Selected Govt. High Schools, Hyderabad, Telangana. The research approach was quantitative approach with descriptive survey with a sample size of 200 adolescent girls studying from VI TO X Class. A structured questionnaire is developed by the investigator to assess the knowledge of students on Anaemia and blood samples of the students were collected and tested by Cyanmethemoglobin method and graded as per ICMR Protocol. Out of 200 adolescent girls, 42(21%) were non anemic, 45(22.5%) were suffering with mild anemia, 86(43%) were suffering with moderate anemia and 27(13.5%) were suffering with severe anemia and there are no adolescent girls suffering with very severe anemia. The mean hemoglobin value of 200 adolescent girls was 9.10, standard deviation was 2.190 and standard error was 0.154. Knowledge of adolescent girls was assessed by using structured questionnaire. Out of 200 samples, 131(65.5%) scored average and above average knowledge scores and 69(34.5%) of them scored below average knowledge scores. The mean knowledge score was 15.82, standard deviation was 3.749 and standard error was 0.264.

Key Words: *Prevalence, Knowledge, Prevention and Control of Anaemia, Adolescent Girls.*

Introduction

Adolescence is like having only enough light to see the step directly in front of you
-Sarah Addison Allen

Health is central to the concept of quality of life. People with sound health can accelerate the pace of economic and social development at the large. Adequate nutrition, a fundamental cornerstone of any individual's health, is especially critical for women because inadequate nutrition causes havoc not only on women's own health but also on the quality of their lives. Adolescence is a period of second decade of life and constitute over one fifth of India's population¹. Adolescence begins when the secondary sexual characteristics appear and ends when somatic growth is completed and the individual is psychologically mature, capable of becoming a contributing member of society.

The nutritional and the health needs of the adolescents are also more because of the growth spurt and the increase in physical activity in them. The World Health Organisation has defined adolescence as the age period between 10 to 19 years of age. The world's adolescent population is facing a series of serious nutritional challenges which are not only affecting their growth and development but also their livelihood as adults. Adolescent girls are at a high risk for anaemia and malnutrition. WHO estimates the number of anaemic people worldwide to be a staggering two billion with 1 approximately 50% of all



anaemia attributable to iron deficiency. Iron deficiency anaemia occurs at all stages of the life cycle. Adolescents, particularly girls, are vulnerable to iron deficiency

India is among the countries with highest prevalence of anaemia in the world Anaemia contributes to poor scholastic performance and increased susceptibility to infection among adolescents Early detection of Anaemia can help prevent complications that impacts on physical, psychosocial wellbeing and development. Information on prevalence of Anaemia can be useful to develop intervention strategies designed to prevent and control Anaemia for the target population.

Extensive, thorough and systematic examination of publications relevant to the research project suggested that there is a need to assess the anemia among targeted population and reduce the impact of anemia by referral, treatment and follow up.

Statement of the Problem

Assess the Prevalence and knowledge Of Adolescent Girls on prevention and control of Anaemia with a view to develop Information Module at Selected Govt. High Schools, Hyderabad, Telangana.

Objectives:-The study aimed to

1. Assess the prevalence of Anaemia among adolescent girls in selected Govt. High Schools.
2. Associate the prevalence of Anaemia with selected demographic variables.
3. .Assess the knowledge of Adolescent girls on prevention and control of Anaemia.
4. Analyse the knowledge of Adolescent girls on prevention and control of Anaemia with selected demographic variables.
5. Develop and provide Information Module on Prevention and Control of Anaemia to the adolescent girls in Selected Govt. High Schools.

Hypotheses

H1There will be significant relationship between prevalence of Anemia and the selected demographic variables.

H2There will be significant relationship between the Prevalence of Anaemia and menstrual disorders of the adolescent girls.

H3There will be significant relationship between knowledge scores on anemia and education of adolescent girls.

Methodology

Research approach: The present study adopted a Quantitative Approach to assess the Prevalence of Anaemia among Adolescent Girls. Research design selected was *Descriptive Survey design* to assess the prevalence and knowledge of Anemia among Adolescent girls of selected Government High Schools.

Variables: The investigator has identified independent variable, extraneous variables. The independent variable is to estimate the prevalence of Anaemia among Adolescent girls with cyan methemoglobin method of Haemoglobin estimation. The extraneous variables which will influence the haemoglobin level are hot coffee, calcium rich diet like milk, beverages, iron rich diet.



Sample, Sample size and Sampling technique: The sample for present study consists of adolescent girls studying VI To X Class in the age group of 12-16 years at Government Girls High School, Sultan bazar and Govt. City Model High School, Chaderghat, Hyderabad, Telangana. The size of the sample for the present study was 200 adolescent girls. Non-probability purposive sampling technique was used for choosing the sample.

Data collection tool and technique: In the present study, the data was collected with the help of structured questionnaire. To collect the required information from the students regarding Anaemia, a structured questionnaire is developed by the investigator to assess the knowledge of students on Anaemia. After administration of Questionnaire, blood samples of the students were collected in pre numbered EDTA tubes and Haemoglobin levels were measured by Cyanmethemoglobin method. In accordance with ICMR protocol, severity of anaemia was graded as mild, moderate, severe and very severe anaemia.

Content validity & Reliability of the tool: To determine the content validity, the tool was submitted to the experts in the field of Nursing. Their valuable suggestions were incorporated and a necessary modification made accordingly in the final tool preparation. Reliability of the tool was tested by Split half method using Cronbach's Alpha. The obtained value of 'r' is 0.878 which denotes the tool is reliable.

Pilot study: Pilot study was conducted at Government High School (Old), Chadergh at, Hyderabad. 20 adolescent girls were selected for Pilot study based on sample criteria using purposive sampling technique. The knowledge of adolescent girls on Anaemia was assessed with structured questionnaire and blood samples were collected for haemoglobin levels. Haemoglobin levels of the sample were measured by using Cyanmeth emoglobin method at Pathology Laboratory, Osmania General Hospital. An information module on Prevention and control of Anaemia was distributed to the sample. For knowledge scores the mean was 12.15 and standard deviation was 5.112 and for haemoglobin levels mean was 11.835 and standard deviation was 1.2445. The tool was found to be reliable as $r = 0.878$.

Data collection procedure: structured questionnaire on Anaemia was administered and blood samples were collected in pre numbered EDTA tubes and they were tested for Haemoglobin levels by cyanmethemoglobin method at Pathology Laboratory, Osmania General Hospital. An information module was given to the sample on Prevention and control of Anaemia.

Plan for data analysis: The collected data was analyzed by using descriptive (frequency distribution, percentage and mean) and inferential statistics (standard deviation, chi-square, standard error) computed from the raw scores obtained by questionnaire and Haemoglobin levels by cyanmethemoglobin method of Haemoglobin estimation. The level of anemia was graded according to ICMR protocol. The values were compared to assess the knowledge and prevalence of anaemia among Adolescent girls.

Results and Discussions

Data was collected from two hundred adolescent girls meeting the selection criteria studying in selected Government High Schools of Hyderabad with the help of questionnaire and Haemoglobin levels were estimated with the help of Cyanmethemoglobin method. The results were computed by using descriptive and inferential statistics.



The findings revealed the following:

**Table 1, Frequency and percentage distribution of sample according to prevalence of Anemia
 N=200**

Prevalence of anemia	f	%
Non Anaemic	42	21.0
Mild	45	22.0
Moderate	86	43.0
Severe	27	13.5
Very severe	-	-

Table 1 shows that out of 200 adolescent girls, 86(43%) of them had moderate anemia, 45 (22.5%) of them had mild anemia, 27 (13.5%) of them had severe anemia,42(21%) were non anemic and there were no girls with very severe anemia.

Table 2, Distribution of Hemoglobin levels of the sample

N=200

	Mean	Std.Deviation	Std.Error
Hemoglobin	9.10	2.190	0.154

Table 2 shows the mean Hemoglobin value of 200 adolescent girls as 9.10, standard deviation of 2.190 and standard error of 0.154 when checked by cyanmethemoglobin method.

Table 3, Frequency and Percentage distribution of the sample according to knowledge on Anemia

N = 200

Level of Knowledge	f	%
Below average	69	34.5
Average and above	131	65.5

Table 3 shows that out of 200 adolescent girls, 131 (65.5%) of them scored average and above average knowledge scores and only 69(34.5%) of them scored below average knowledge scores.

Table 4, Distribution of sample According to Knowledge Scores on Anemia

N = 200

	Mean	Std.Deviation	Std.Error
Knowledge	15.82	3.749	0.264

Table 4 shows the mean knowledge score was 15.82, standard deviation of knowledge score was 3.749 and standard error was 0.264.



Conclusion

The following conclusions were drawn on the basis of the findings of the study. After assessing the prevalence of anemia and knowledge of adolescent girls on prevention and control of anemia, it shows that out of 200 adolescent girls, 42(21%) were non anemic, 45(22.5%) had mild anemia, 86(43%) had moderate anemia and 27(13.5%) had severe anemia which needs to be urgently corrected. The mean haemoglobin value of 200 adolescent girls was 9.10, standard deviation was 2.190 and standard error was 0.154. There was no significant association between prevalence of anemia and selected demographic variables except age of the sample. Hence H1 is rejected. There was no association between menstrual disorders and prevalence of anemia. Hence H2 is rejected. Among 200 adolescent girls, 131(65.5%) scored average and above average knowledge scores and 69 (34.5%) of them scored below average knowledge scores. The mean knowledge score was 15.82, standard deviation was 3.749 and standard error was 0.264. Association was seen with education of sample, occupation of mother, status of menarche, duration between menstrual period and duration of menstrual period. Hence H3 is accepted.

Implication of the study

Nursing practice

The nurse can plan and conduct health education programmes regarding prevention and control of anemia, creating awareness among target groups with education. The nurse can plan and organize school health programmes and referring the sick students at the earliest in collaboration with school teachers. The main focus should be on prevention of anemia.

Nursing education

Education of adolescents, families and communities can be more focused on prevention and control of anemia.

Nursing administration

The nurse administration can make arrangements to provide services to the adolescent girls in creating awareness regarding importance of diet, healthy habits. Various in service programmes can be conducted for nurses for continuous update of knowledge and for the benefit of the adolescent girls.

Nursing research

Extensive research on related health issues of adolescent girls will provide the credibility to influence the decision making and policy making to provide better services to adolescent girls research may be done continuously in order to improve the quality of life and to reduce the incidence of anemia.

Limitation of the study: The study was limited to adolescent girls ,

1. Studying in selected Govt. High schools in Hyderabad.
2. Present at the time of data collection
3. Willing to participate in the study

Recommendations: On the basis of the findings of the present study, following recommendations were made.

- a complete survey can be undertaken covering the adolescent girls studying in Government High schools.



- A comparative study can be conducted between adolescent girls studying in Government and Private schools.
- A similar study can be conducted in different settings to strengthen the findings.

References

Books

1. Indian Undernourished children-A call for Reform and Action, World Bank Report,2007.
2. KawaljitKaur(2014), ‘Anemia- Silent Killer among women in India- Present scenario’ B. D. Arya Girls College, Jalandhar , Punjab, India.
3. K. Park,(2011), Social And Preventive Medicine, 20th edition, New Delhi, Bhanot Banarsidas Publishers, Page No498-502.
4. Brunner and Suddarth (2008),Text-Book of Medical-Surgical Nursing , 10th edition ,Lippincott Publishers; philadelphia1045-1046.

Journals and Periodicals

1. Swapna Jose (2013) socio demographic determinants of Anaemia among Adolescent Girls in North Kerala. Nightingale Nursing Times, May; vol-9page No41-44.
2. Raj kumarDubey (2013), ‘A Retrospective study on prevalence of Anemiaamong adolescent females’ The Pharma Innovation Journal, Vol-2, No7.
3. RameshVerma(2013), ‘ prevalence of anemia among adolescents in Govt. Schools, Rohtak’ International Journal Of Social Science and Interdisciplinary Research Vol-(2) 9 .