



"A STUDY TO ASSES THE EFFECTIVENESS OF STRUCTURE TEACHING PROGRAMME ON KNOWLEDGE REGARDING IRON DEFICIENCY ANEMIA AMONG ADOLESCENT GIRLS IN SELECTED HIGHER SECONDARY SCHOOLS OF MEHSANA DISTRICT"

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Abstract : Anemia is defined as a condition in which the number of red blood cells (RBCs) and their oxygen-carrying capacity is insufficient to meet the body's physiologic needs. It is a condition when the normal number of RBCs (< 13 in men). Globally, anemia is the most common and inflexible nutritional problem affecting around 2 billion of the world's population having major impact on human health and social and economic development; and more than 89% of this burden occurred in developing countries. To assess the knowledge regarding iron deficiency anemia among adolescent girls in selected higher secondary schools of mehsana district. To assess the effectiveness of structure teaching program regarding iron deficiency anemia among adolescent girls in selected higher secondary schools of mehsana district. To find out the association of the pretest knowledge score with their selected demographic variable. The mean pre test mean score was increased from 9.35 to 10.11. the 't' value 6.05 was much higher than the table value at 0.001(pre set level of significance was 0.05). Conclusion: The study concluded that structured teaching program was effective on increasing the hemoglobin level among adolescents girls. The study concluded that structured teaching program was effective on increasing the hemoglobin level among adolescents girls.

Keywords:- Asses, Knowledge, Effectiveness, Structure teaching program, Adolescent.

INTRODUCTION

Health is a fundamental human right and health is central to the concept of quality of life . Adolescents is a period of second decade of life and constitute over one fifth of India's population. Adolescence begins when the secondary sex characteristics appear and ends when somatic growth is completed and the individual is psychologically mature, capable of becoming a contributing member of society. Adolescents are in the age group of 12 to 18 years. The girl should have weight approximately 42-64 kg and height approximately 155-169 cm. Total nutrient requirements are increased during adolescence age to support a period of dramatic growth and development. Eating right food at right time will prevent the nutritional deficiencies especially Iron deficiency disorders (Dorothy *et al.*, 2007).

Adolescence is a critical stage in the life cycle, when the health of females is affected due to growth spurt, beginning of menstruation, poor intake of iron due to poor dietary habits and gender bias. Iron deficiency anemia affects over 60% of the adolescent girls in India. Anemia in adolescent girls has far-reaching implications. The anaemic adolescent girls grow into adult women with compromised growth, both physical and mental conditions. These women have low pre-pregnancy weight, and are more likely to die during childbirth and deliver low birth weight babies.

NEED FOR THE STUDY

Iron deficiency anemia is the most prevalent nutritional problem in the world today affecting all societies in developed and developing alike. Adolescent girls are particularly susceptible to iron deficiency anemia because of the increased need for the dietary iron for haemoglobin and myoglobin synthesis, during this rapid period of growth, when blood volume and muscle mass are expanding in adolescent girl. As an individual adolescent girl need extra iron according to the stage of development.

Anemia is the term that indicates a low red cell count and a below normal haemoglobin or haematocrit level. The prevalence of anemia in India is reported that in urban and rural is 50% and 60% respectively. The solution for combating anemia are both inexpensive and effective by providing iron rich diet increasing iron absorption by inclusion of ascorbic acid in diet.

Hence this has stimulated, the investigator to conduct the study to assess the effectiveness of structured teaching program on anemia, among adolescent girls. The investigator has selected amla to provide vitamin C (ascorbic acid) because it is locally available and cheap than any other sources and it has value of Vitamin C (600 in 100gm of Amla) and ferrous sulphate with 20mg of elemental iron for iron supplementation.

Also during the review of literature the investigator come across many studies on synthetic ascorbic acid and iron absorption. Only few studies are a natural ascorbic acid iron absorption. This gave to the investigator to study the effect of amla juice on iron absorption.

STATEMENT OF PROBLEM

"A STUDY TO ASSES THE EFFECTIVENESS OF STRUCTURE TEACHING PROGRAME ON KNOWLEDGE REGARDING IRON DEFICIENCY ANEMIA AMONG ADOLESCENT GIRLS IN SELECTED HIGHER SECONDARY SCHOOLS OF MEHSANA DISTRICT

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding iron deficiency anemia among adolescent girls in selected higher secondary schools of mehsana district.
2. To assess the effectiveness of structure teaching program regarding iron deficiency anemia among adolescent girls in selected higher secondary schools of mehsana district.
3. To find out ciation of the pretest knowledge score with their selected demographic variable

REVIEW OF LITERATURE

- In this study the relevant literature reviewed has been organized and presented under the following headings.
- Literature related to the prevalence and distribution of iron deficiency anemia.
- Literature related to Factors and symptoms Related to iron deficiency.
- Literature related to iron deficiency anemia and changing dietary behaviours among adolescent girls.

THE PREVALENCE AND DISTRIBUTION OF IRON DEFICIENCY WORLDWIDE

Premalatha, T., Valarmathi, S., Srijayanth, P., Sundar, JS., Kalpana, S. (2012) A cross-sectional survey was executed to estimate the prevalence of iron deficiency anemia among adolescent school girls in Chennai, Tamil Nadu. A sample of 400 female school students in the age group of 13-17 years were selected by using stratified random sampling method. Socio demographic details, anthropometric measurements were obtained. Haemoglobin was estimated using cyanmethaemoglobin method. Study results shows that the prevalence of anemia was found to be 78.75% among school students. Chi-square statistics shows significant association ($p < 0.05$) of anemia is with type of family, socioeconomic status and diet. In this study 42.5% of girls with BMI < 18 were found to be anemic. This study predicts that haemoglobin level tends to decrease as age progresses.

Meenal ,VK., Durge, PM., Kasturwar, NB. (2012). A cross sectional community based study was conducted among 272 adolescent girls in an urban slum area under Urban Health Training centre, department of Community Medicine, NKPSalve Institute of Medical science, Nagpur from June 2009 to February 2010. Out of five areas one area was selected by simple random sampling. Information regarding socio-demographic and menstrual factors was recorded in pre-designed, pre-tested proforma. Haemoglobin estimation was done by Sahli's haemoglobin meter. Data was analyzed by mean, standard deviation and chi square test. The study result shows that the prevalence of anemia was found to be very high (90.1%) among adolescent girls. Majority of the girls were having mild or moderate anemia (88.6%). The study concluded that nutrition education along with nutritional supplementation and iron folic acid tablets should be provided to all girls.

Ramzi ,M., et.al. (2011). A cross sectional study was conducted to investigate the prevalence of anemia, iron deficiency anemia and related risk factors in adolescent school girls in Kavar urban area in southern Iran. A total of 363 adolescent school girls were evaluated. Socioeconomic, demographic and related risk factors were obtained by a questionnaire. Hematological parameters and serum iron indices were measured. The study results shows that there were 21 cases of anemia (5.8%), 31 (8.5%) iron deficiency and 6 (1.7%) iron deficiency anemia. Most of anemic girls (85.7%) had mild anemia. MCV, TIBC, age, and BMI had statistically significant relationship with haemoglobin. Only parasites infestation in the last three months had a 6.83 times more risk of anemia than those without this history

RESEARCH METHODOLOGY

This chapter deals with description of the methods and different steps used for collecting and organizing data for the investigation. It includes the description of the research approaches, research design, setting, population, the sample, sampling technique, sampling criteria, the development and description of tool, the pilot study, data collection procedure, and the plan for the data analysis in the study. This present study was done to assess the Effectiveness of Structured teaching program on haemoglobin level among adolescent girls with iron deficiency anemia at selected Govt. school of mehsana district .

PROCEDURE FOR DATA COLLECTION

The data collection procedure was done for 4 weeks (12 .8.22 to 15.9.22) in Govt. School, mehsana district . The data was collected and written permission was obtained to conduct the study from the parents of the samples. The samples were informed by the researcher about the nature and purpose of the study. After obtaining the verbal and written consent , the demographic data have been collected with the use of self administered questionnaire and assessment was done as per observation checklist and pre-test including estimation of haemoglobin level among adolescent girls were tested by cell count method and iron deficiency anemia is confirmed through smear test in the clinical laboratory by the Pathologist . On the first day deworming done by giving T.Albendazole 400mg per sample as prescribed by Medical Officer .. Next day onwards the amla juice 20ml with elemental iron 20mg (as prescribed by the Medical Officer) was given after food to the samples daily for 30 days. The 20 ml of amla juice

contains 600 mg of vit.c After that on 31st day the post test was done by assessment of haemoglobin estimation by cell count method.

ETHICAL CONSIDERATION

The research proposal was approved by the experts of the Dissertation Committee of College of Nursing, mehsana district Medical College, mehsana district , and the same was approved by Institutional Review Board, Independent Ethical Committee of Government, Rajaji Hospital, mehsana district -20 for conducting the pilot study and main study. The formal permission was obtained from DDHS, mehsana district . The committee suggested the researcher to continue the study with necessary modification.

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected from 40 Adolescent girls with anemia in order to assess the effectiveness of structured teaching program on iron deficiency anemia. The purpose of analysis was to reduce the collected data to manageable and interpretable form, so that the research problem can be studied and tested.

Comparison of pre and post test Anemia level among adolescent girls

TEST	MILD		MODERATE	
	f	%	f	%
Pre test	4	10	36	90
Post test	20	50	20	50

The above table represents the effectiveness of amla juice intervention on improving the haemoglobin level among adolescent girls. In pre test, the adolescent girls 4 (10%) had mild anemia and 36 (90%) of them had moderate anemia. Whereas in post test most of them had increased their haemoglobin level, the 36(90%) moderate anemia was reduced to 20 (50%) mild anemia, and 4 (10%) mild anemia increased as 20 (50%) mild anemia.

It is inferred that, after amla juice intervention for 30 days moderate anemia 36 (90%) has been reduced to 20 (50%) as mild anemia and mild anemia from 4 (10%) improved to 20 (50%).

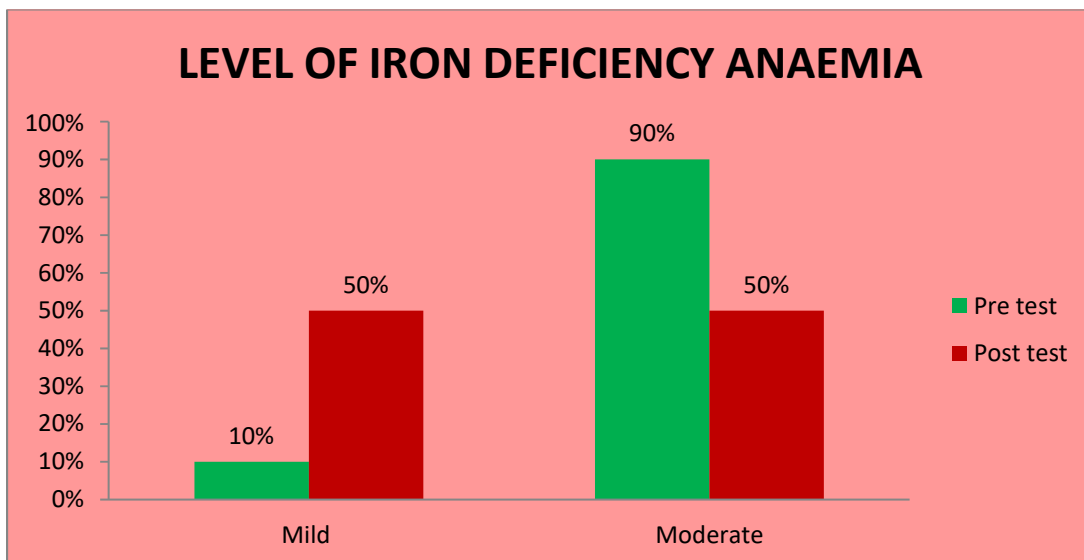


FIGURE 4.10: COMPARISON OF PRE AND POST TEST LEVEL OF ANEMIA AMONG ADOLESCENT GIRLS.

The above bar diagram shows that 90% moderate anemia was reduced to 50% after amla juice intervention.

Mean, Standard deviation and mean percentage for pre and post test level of anemia among adolescent girls.

Subjects	pre test		post test		MD
	Mean	SD	Mean	SD	
Overall	9.35	0.65	10.11	0.57	0.76

Above table reveals that before intervention haemoglobin level among 40 subjects the pre test means was 9.35 with standard deviation of about 0.65. After intervention haemoglobin among 40 subjects, the post test mean was 10.11 with standard deviation of 0.57. The mean deviation in the haemoglobin between pre and post test was 0.76.

Paired ‘t’ test - Effectiveness of structured teaching program intervention on iron deficient anemia.

Subjects	pre test		post test		't' value	p value
	Mean	SD	Mean	SD		
Overall	9.35	0.65	10.11	0.57	6.05	P<0.001

*-P<0.05 ,significant and **-P<0.01 &***-P<0.001 Highly significant

The calculated 't' value (6.05) was much higher than the table value at 0.001 level of significance (pre set level of significant was 0.05) . The mean score shows the significant change in the Hb level, Thus it was very clear that there was a significant improvement in Hb level among adolescents after amla juice with elemental iron

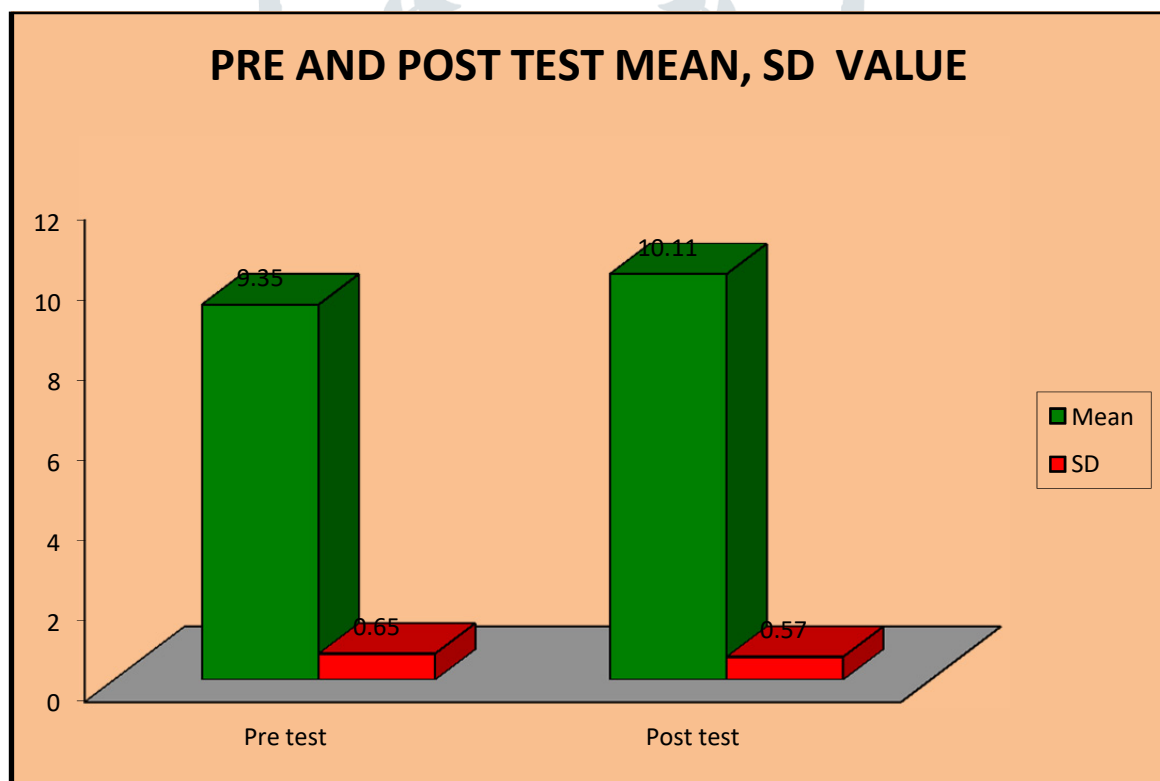


FIGURE 4.11: DISTRIBUTION OF MEAN, SD OF PRE TEST AND POST TEST HAEMOGLOBIN LEVEL AMONG ADOLESCENT GIRLS.

The above bar diagram shows that the mean haemoglobin level of adolescent girls was increased ,after intervention whereas SD was decreased after amla juice intervention.

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