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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING IRON DEFICIENCY ANEMIA AMONG ADOLESCENT GIRLS IN SELECTED NURSING COLLEGE, BANGALORE

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ABSTRACT

Introduction: - Anemia is one of the most common public health problem worldwide and especially in developing countries. Most common type of nutritional anemia in iron deficiency anemia due to rapid growth and developmental process of adolescent. Anemia is defined as a condition in which the number of Red Blood Cells (RBC) and their oxygen - carrying capacity is insufficient to meet the body's physiological needs. It's a condition when the normal number of RBCs (<4.2 million/dL) or Hemoglobin (Hb) level (<12g/dL) in women and <13 in men [1]. Adolescence is the phase separate from both early childhood and adulthood. It is a transitional period that require special attention and protection .Physically children go through a member of transition while affect emotional skill as well as physical and mental abilities.[2]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, more that 89% of this burden occurred in developing countries. Accounting for half of all cases, iron deficiency anemia is the most common cause of anemia. However other conditions like nutritional deficiency, acute and chronic inflammations, parasitic infections, growth spurt, increase in iron requirements, increased iron loss from the body during the menstruation, inherited or acquired disorders of hemoglobin synthesis, RBC production or survival are also considered cause of anemia.[3] Design:-Pre-experimental design (one group pre-test post-test design) was used for this present study of effectiveness of structured teaching programme on knowledge regarding iron deficiency anemia among Adolescent Girls In Selected Nursing College, Bangalore. 60 Nursing students were recruited by non-probability purposive sampling technique. Necessary administrative permission was obtained from concerned authority. Structured interview schedule was used to elicit the baseline data and structured questionnaires were used to elicit the knowledge regarding Iron deficiency anemia, among of nursing studentsSetting:-The study was conducted in selected Nursing College, Bangalore, 60 samples were selected for the present study. Result: - The study revealed that among 60 nursing students, 9 (15%) nursing students had adequate knowledge, 51 (85%) nursing students had moderately adequate knowledge & there was no inadequate knowledge found in the post-test score. The mean pre-test knowledge score of nursing students was 16.5, whereas the mean post-test knowledge score

was 23.6. The obtained 't" value was 12.05 which was found statistically significant 0.05 levels. Conclusion :- The study concluded that the structured teaching programme on knowledge regarding iron deficiency anemia among Adolescent Girls from selected nursing college, Bangalore carried out, the study was found to be effective in the improving knowledge of nursing students as evidenced by the significant change between pre-test and post-test knowledge score.

INTRODUCTION

Nutritional anemia affects both sexes and all age groups; the problem is more prevalent among adolescent girls. Furthermore malaria, intestinal parasitic infections, tuberculosis, and pneumonia are some of the morbidity related determinants of anemia. On the other hand, poor economic status, the type of family size, age, large number of children and occupation are socio demographic factors associated with anemia. Anemia causes adverse consequences as the disease progresses. It is not only affects their growth of adolescent girls but also affects their attentiveness, memory and school performance and retention in school and attendance. [4]

It also cause delay in onset of menarche , affects immune system leading to infections .If the anemic adolescents girls become pregnant , it may increase fetal morbidity and mortality , increase the perinatal risk , increase the incidence of low birth weight (LBW) , and overall increase in infant mortality rate (IMR) and maternal mortality rate (MMR) . As growing pregnant adolescents compete with the growing foetus for nutrients anemia in pregnancy will be worse than in older women.[5]

The treatment of deficiency anemia, whether it is in children or adults, is with vitamin supplements and mineral rich foods. Food sources of iron in particular include meat, poultry, eggs, vegetables, and fortified cereals. If anemia does not respond to oral treatments , it may be necessary to administer parenteral using a drip or hemodialysis .Parenteral iron in particular involves risk of fever , chills , backache , myalgia ,dizziness , syncope , rash and anaphylactic shock. A follow-up blood test is essential to demonstrate whether the treatment has been effective.[6].

Some kinds of anemia, such as those that are inherited, cannot be prevented. However, you can prevent anemia caused by iron deficiency, Vitamin-B12 deficiency and Vitamin-B9 deficiency by eating well. This includes eating a diet with enough foods that provide iron and these vitamins, along with vitamin sea food sources to help with the absorption.[7]

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The highest prevalence of iron deficiency anemia among our population could be linked to poverty which resulted in insufficient nutrition and inadequate health care as well as educated states. Besides sex and age, this study investigated some possible risk factors significantly associated with the iron deficiency anemia. The low income families ,no or infrequent intake of breakfast , red meat , fish , chicken, vegetables and fruits and some lifestyle habits (drinking tea, chewing gutuka , and smoking) and unawareness about anemia and its causes.

STATEMENT OF PROBLEM

"A study to evaluate the effectiveness of a structured teaching programme on knowledge regarding iron deficiency anemia among adolescent girls in a selected nursing college, Bangalore."

OBJECTIVES:

1. To assess the pre-test level of knowledge regarding Iron deficiency anemia among adolescent girls in selected nursing college, Bangalore.
2. To assess the post-test level of knowledge regarding Iron deficiency anemia among adolescent girls in selected nursing college, Bangalore.
3. To evaluate the effectiveness of a structured teaching program regarding Iron deficiency anemia among adolescent girls in a selected nursing college, Bangalore.
4. To find out association of post-test knowledge regarding Iron deficiency anemia with selected demographic variables.

HYPOTHESIS

H1:- There will be significant difference between pre-test and post-test knowledge score regarding the iron deficiency anemia among adolescent girls at selected nursing college, Bangalore.

H2:- There will be significant association between the post-test knowledge score and selected demographic variables regarding the iron deficiency anemia among the nursing students at selected nursing college, Bangalore.

MATERIALS & METHODS

The research design adopted for this study is Evaluative research approach. The research design used

for this study is one group pre-test post-test design which belongs to the Pre-experimental study.

The study was conducted in selected nursing college, Bangalore. The sample size of this study comprised of 60 nursing students from selected nursing college, Bangalore, who met the inclusive criteria were selected through the non-probability purposive sampling technique. Structured knowledge Questionnaire and structured teaching programme was used as a research tool. Since, it is considered to be the most appropriate instrument to elicit the response from subjects. The reliability of the tool was established by using split half method and Karl

Spearson's formula. It was found 0.9 for structured knowledge questionnaire and tool was considered reliable for proceeding with main study.

A letter requesting permission was sent to the concerned authority of the selected nursing college, Bangalore prior to the data collection during the month of November 2021, and permission was granted for the same. The data was collected in the month of December 2021 at selected nursing colleges, Bangalore. The data was collected from 60 nursing students by using non-probability purposive sampling technique. The purpose of questionnaire was explained to the samples with self - introduction. The questionnaire was distributed to the nursing students and they took 15-20 minutes to fill up the answers for the questions and they were very co-operative. After conducting the pre-test, on the same day structured teaching programme was administer for the same and post-test was conducted after 7 days by using the same tool used for the pre-test.

RESULTS

Description of pre-test and post-test knowledge of nursing students regarding Iron deficiency anemia.

The data presented in the table-1 shows that 16 (26.7%) nursing students had inadequate knowledge, 44 (73.3 %) nursing students had moderately adequate knowledge and no one found adequate knowledge in the pre-test. The mean is 16.5 and standard deviation was 4.8 in the pre-test knowledge.

Whereas 09 (15%) nursing students had adequate knowledge, 51 (85%) nursing students had moderately adequate knowledge and no one found inadequate knowledge in post-test. The mean is 23.6 and standard deviation of 4.09 was found in the post-test knowledge.

The data presented in a table-2 shows that the obtained [t] value was 12.05, which was found with statistically significant at 0.05 levels.

IMPLICATION OF THE STUDY

The result of the study proceed that nursing students had inadequate knowledge regarding Iron deficiency anemia. The findings of the study have scope in the following areas,

Nursing Practice:

1. Nurses working in community fields should have enough knowledge about iron deficiency anemia among adolescent girls in selected nursing colleges. They should be keen observers since the students cannot speak out about their problems.
2. Regular awareness classes can be conducted for students to increase the knowledge about iron deficiency anemia
3. Not Only nurse but all the health care providers such as auxiliary nurses and midwives, village nursing working in community centers should provide in services education regarding iron deficiency anemia

Nursing Education:

1. Nursing curriculum can be modified with increase emphasis on iron deficiency anemia
2. Students can also be trained to work in care under proper guidance.

Nursing Administration:

1. Administration can organize structured teaching programmes in nursing colleges to improve the knowledge regarding iron deficiency anemia.
2. The nursing administrator should concentrate on the proper selection, placement and effective utilization of the nurse in all areas giving opportunity for creativity, creating interest and enhancing ability in educating adolescent girls regarding iron deficiency anemia.

Nursing Research:

The findings of the study had shown the majority of the students had inadequate knowledge regarding iron deficiency anemia. The study motivates the beginning researcher to conduct the same study with the different variables on a large scale.

ASSUMPTIONS

- Community Health Nurse has the role in educating adolescent girls about the importance of consuming iron rich diet.
- Structured teaching programs may improve the knowledge among adolescent girls regarding prevention of Iron deficiency anemia.

LIMITATIONS

1. The study was conducted in selected colleges
2. Sample was selected only from one institution; hence generalization can only be made for the selected sample.
3. The study did not use control group. The investigator had no control over the events that took place between

pre-test and post-test.

RECOMMENDATIONS

Based on the study findings the following recommendations have been made for further study:

1. Similar study can be carried out on larger samples for broader generalization.
2. A similar study can be conducted among mothers to assess the knowledge on selected aspects of Iron deficiency anemia.
3. A comparative study may be conducted to assess the knowledge, belief and practice on iron deficiency anaemia among rural population.
4. A comparative study could be conducted in different settings to find out the effectiveness of structured teaching programme.
5. An experimental study could be replicated with a control group.
6. A study could be conducted on large group and different setting and students from various colleges.

Table 1: Frequency, percentage, mean and standard deviation of pre-test and post-test knowledge score of nursing students regarding Iron deficiency anemia. n=60

Knowledge level	Category	Classification of Nursing students knowledge			
		Pre-test		Post-test	
		Frequency(f)	Percentage (%)	Frequency(f)	Percentage (%)
Adequate knowledge	75-100%	0	0%	09	15%
Moderate knowledge	50-74%	44	73.3%	51	85%
Inadequate knowledge	50% and below	16	26.7%	0	0
Total		**60**	**100**	**60**	**100**

Table No.2: Mean, Standard Deviation and paired't' test to determine the effectiveness of structured teaching programme regarding knowledge on Iron deficiency anemia among nursing students. n=60

Max score	Mean	SD	Meandifference	paired "t'test	Significance
Pre-Test	16.5	4.8	7.1	12.05	0.05*
Post-Test	23.6	4.09			

Table No.3: Association of effectiveness of structured teaching programmes on knowledge regarding iron deficiency anemia with selected demographic variables n=60

S.No	Demographic variable	No	%	Levels of knowledge				Chi Square
				Adequate		Moderate		
1	**Age:** 18-20 years 21-23 years	 46 14	 76.6% 23.3%	 6 3	 13% 21.5%	 40 11	 87% 78.5%	x^2 =0.59
2	**Religion** Hindu Christian Muslim	 34 12 14	 57% 20% 23%	 4 2 3	 11.8% 16.6% 21.5%	 30 10 11	 88.2% 83.3% 78.5%	x^2 =0.75
3	**Education:** Arts science	 28 32	 46.6% 53.3%	 2 7	 7.1% 21.8%	 26 25	 92.8% 78.2%	x^2 =2.52*

4	**Type of family:**							
	Nuclear	41	68.3%	2	4.8%	39	95.2%	x^2 =10.38*
	Joint	19	31.7%	7	36.8%	12	63.2%	

NS Not significant**
S* Significant

DISCUSSION

Structured teaching programme was found to be an effective educative method for improving the knowledge of nursing students in the selected nursing college regarding iron deficiency anemia. The findings were similar to other studies, which shown that nursing students having good knowledge on iron deficiency anemia. In the present study results revealed that obtained [t] value was 12.05, which were found with statistically significant at 0.05 levels.

CONCLUSION:-

The study concluded that the Structured teaching programme onknowledge regarding iron deficiency anemia of nursing students in the selected nursing college carried out was effective in improving the knowledge of nursing students as evidenced by the significant change between pre-test and post-test knowledge score.

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CONFLICT OF INTEREST

Nil

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