RV Journal of Nursing Sciences (RVJNS)
e-ISSN No: 2583-472X
Vol-2, Issue-2, July-December -2023

A study to assess the effectiveness of Structured teaching program on Prevention of Anemia among adolescent girls in selected high School, Marsur Village.

Dr. S R Gajendra Singh[1], Mr.Chetan Kumar M R[2], Ms. Marlin Suja[3], Ms. Chandana Basavanna[4], Ms. Nayana D. O[5], and Ms. Adrija Bhattacharya Majumder[6]

[1]Principal, R V College of Nursing, Bengaluru-560011

[2]Associate professor & HOD-Department of Community Health Nursing
RV College of Nursing, Bangalore-560011

[3]Junior Lecturer, RV College of Nursing, Bengaluru.

[4,5,6]Students of 4th year Basic B.Sc Nursing, R V College of Nursing, Bengaluru-5600011

Email : chetankumarmr.rvcn@rvei.edu.in Mobile: 9986214552

ABSTRACT

A study to assess the effectiveness of Structured Teaching program on Prevention of Anemia among adolescent girls in selected high School, Marsur Village. Quantitative research approach and quasi experimental study was conducted to determine the effectiveness of structured teaching program on knowledge regarding prevention of anemia among adolescent girls in selected high school, rural community area, Bengaluru by using one group pre-test and post-test research design. Fifty adolescent girls were selected randomly by using Simple random sampling technique method. The pretest mean was 11.08(36.6%) and post test mean was 21.8(72.6%) and enhancement mean was 9(30%). The paired t-value P<0.05 shows 6.1. Hence there is a significant difference between pre test and post test knowledge score regarding prevention of anemia among adolescent girls. The significance was measured at 5% level i.e., p<0.05.There was significant association between age, dietary pattern, Type of family, Mother education, occupation of the father and mother, size of family, source of information and non significant association between father education and monthly family income in the pre test knowledge on prevention of anemia among adolescent girls. The knowledge on prevention of anemia was significantly associated with Age, Class of study, occupation of the father, dietary pattern, previous knowledge related to Prevention of anemia among adolescent girls, source of health information and Education of the father, & Family income are not significantly associated with at 5% (P<0.05).

Keywords: Knowledge, Anemia, Structured teaching program

Introduction

Anemia is the most common nutritional deficiency disorder in the world. It is a condition that occurs when the red blood cells do not carry enough oxygen to the tissues of the body. WHO defines anemia as a condition in which Hemoglobin (Hb) content of blood is lower than normal as a result of deficiency of one or more essential nutrients, regardless of the cause of such deficiency. Most of the adolescent girls are due to inadequate supply of nutrients like iron, folic acid vitamin B12, proteins amino acids, vitamin A,C and other vitamins of B- complex group i.e. , niacin and pantothenic acid are also involved in the maintenance of hemoglobin level[1].

In India, adolescent girls are sizable segment of its population form a vulnerable group and are at a greater risk of morbidity and mortality. It is the shaping period of life when maximum amount of physical, psychological and behavioral changes take place. This is a vulnerable period in the human life cycle for the divider of nutritional Anemia. Adolescent girls are particularly prone to iron deficiency Anemia because of increased demand of iron for hemoglobin, myoglobin and to make up the loss of iron for to menstruation and poor dietary habits[2].

Methodology:

Research methodology is a way of systematically solving the research problems. It explains the steps that are generally adopted by a researcher in studying the research problem along with the logic behind them. It includes steps, procedures and strategies for gathering and analyzing the data in research investigation.

Quantitative research approach and quasi experimental design is adopted for the present study. Based on the geographical proximity, feasibility of conducting the study and availability of the samples. The present study was conducted in government high school, Marsur village, Anekal Taluke, Bengaluru.

Objectives of the study

1. To assess the pre test and post test level of knowledge regarding Prevention of anemia among adolescent girls.
2. To compare the pretest and post test knowledge scores regarding Prevention of anemia among adolescent girls.
3. To associate the pre test knowledge regarding Prevention of anemia among adolescent girls with their selected demographic variables.

Research hypotheses

H1: There will be significant difference between the mean pre-test and post test knowledge regarding Prevention of anemia among adolescent girls in selected rural community area.

H_2: There will be significant association between the pre test knowledge regarding Prevention of anemia among adolescent girls in selected rural community area with their selected demographic variables.

Setting

The present study was conducted in selected Government high school, under Marsur Village, Bangalore.

Sample

Adolescent girls in selected high school, under Marsur gram panchayath, Bangalore.

Sample size

The sample size of the present study consists of 50 adolescent girls, Government high school, rural community area Bengaluru.

Criteria for sampling selection

Inclusion Criteria

The study includes

1. Adolescent girls, who belong to the age group between 12-18years.
2. Adolescent girls who are available at the time of data collection.

Sampling technique (lottery method).

Exclusion criteria

The study excluded

1. Adolescent girls who are not willing to participate in the study.
2. Adolescent girls who cannot understand Kannada / English language

Sampling technique

The sampling technique adopted for the study was Probability, Simple Random

Section 1: Assessment of Level of Knowledge regarding Prevention of anemia among adolescent girls.

Table 1: Percentage and Frequency distribution of adolescent girls according to level of Pre test and post test knowledge score. n=50

Knowledge	Pre Test		Post Test	
	No.(50)	%	No.(50)	%
Inadequate (<50%)	36	72	3	6
Moderate (51-75%)	14	28	17	34
Adequate (>75%)	0	0	30	60

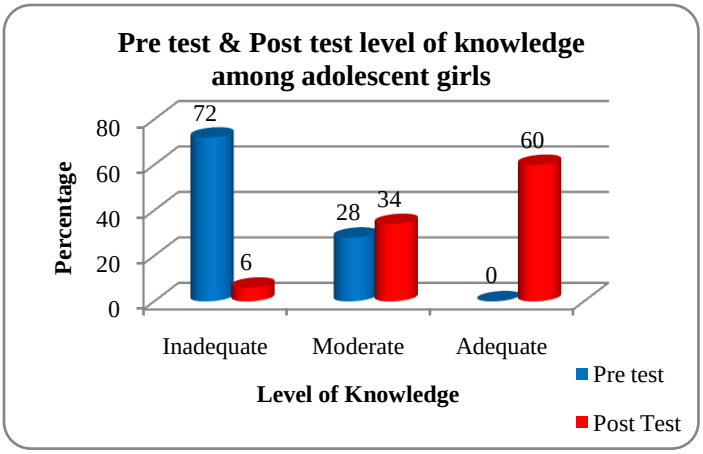

Figure:1 Percentage and frequency distribution of adolescent girls according to level of pre-test and post test knowledge on prevention of anemia

Section 2: Compare the effectiveness of structured teaching programme on Knowledge regarding prevention of anemia among adolescent girls.

Table 2: Mean, SD, and Mean percentage of pre test, post test and Enhancement Scores and statistical significance. N=50

S/N	Domain	Pre test				Post test			Enhancement			paired t value	P- value
		max scor	Mean	SD	Mean %	Mean	SD	Mean %	Mean	SD	Mean %		
1.	Knowledge on anemia	9	3.76	1.7	41.7	6.1	1.8	68.3	2.36	2.64	26.2	**3.01**	**P<0.05**
2.	Knowledge on causes and risk factors of anemia	4	1.64	0.9	41	2.9	0.9	74.5	1.26	1.15	31.5	**4.92**	**P<0.05**
3.	Knowledge on clinical manifestations of anemia	2	1.08	0.7	54	1.3	0.5	67.3	2.24	1.89	12	**2.06**	**P<0.05**
4.	Knowledge on diagnostic evaluation of anemia	2	0.84	0.8	42	1.4	0.6	73.0	2.58	1.01	29	**2.01**	**P<0.05**
5.	Knowledge on management of anemia	5	1.6	0.9	32	3.3	1.1	66.5	1.66	1.4	33.2	**7.5**	**P<0.05**
6.	Knowledge on Prevention of anemia	8	3.08	1.4	38.5	5.7	1.8	72.1	2.7	2.6	33.7	**4.3**	**P<0.05**
	Over All	30	11.08	6.7	36.6	21.8	3.66	72.6	9	6.5	30	**6.1**	**P<0.05**

Note: * Significant at 5% level for 49df (i.e.P<0.05)

The above Table 2 reveals the mean, SD and improvement of knowledge score on prevention of anemia among adolescent girls. With regard to pre test and post testKnowledge regarding prevention of anemia among adolescent girls, the pretest mean was 11.08(36.6%)and post test mean was 21.8(72.6%) and enhancement mean was 9(30%). the paired t-value P<0.05 shows that 6.1. hence there is a significant difference between pre test and post test knowledge score regarding prevention of anemia among adolescent girls.

Table 3: Effectiveness of Structured Teaching Program. **N=50**

Aspects of Knowledge	Max. score	Enhancement				
		Mean	SD	Mean %	Paired t-value	P- value
Prevention of Anemia among adolescent girls	30	9	6.5	30	6.1	P<0.05

Note: S-Significant at 5% level (p<0.05); NS- Not significant at 5% level (p>0.05)

Section-3: Association of pre-test level of knowledge and selected demographic variables of adolescent girls regarding prevention of anemia,

Table 4: Association between pre test knowledge and selected demographic Variables ofAge, Dietary pattern, religion, type of family, education, occupation and income.

SI/ No.	Demographic variable	Samples(n)		knowledge level of Respondents				Chi-square (χ 2) - value
				≤ Median(13)		>Median(13)		
		n=50	%	No.(28)	%	No.(22)	%	
1.	Age							11.88 df=3 S
	a. Below 13 years	8	16	4	50	4	50	
	b. 13-14 Years	28	56	15	53	13	46	
	c. 15-16 Years	13	26	9	69	4	31	
	d.17 Years & above	1	2	0	0	1	100	
2.	Dietary pattern							16.14 df=1 S
	a. Vegetarian	1	2	2	0	3	100	
	b. Non-Vegetarian	0	0	0	0	0	0	
	c. Mixed	49	98	26	61.2	19	38.7	
3.	Type of family							15.57 df=3 S
	a. Single parent	3	6	3	33.3	2	66.6	
	b. Nuclear family	36	72	14	38.8	17	61.1	
	c.Joint family	9	18	10	66.6	2	33.3	
	d.Extended family	2	4	1	50	1	50	
4.	Father education level							2.5 df=4 NS
	a. Non-formal	20	40	10	50	8	50	
	b. Primary	10	20	4	40	3	60	
	c. Secondary	18	36	7	38	9	61.1	
	d. 10+2 (PUC)	2	4	1	50	1	50	
	e. Graduation	7	10	6	0	1	0	

Note: S-Significant at 5% level (p<0.05); NS- Not significant at 5% level (p>0.05)

SI/ No.	Demographic variable	Samples(n)		knowledge level of Respondents				Chi-square (χ 2) - value
				≤ Median(13)		>Median(13)		
		n=50	%	No.(28)	%	No.(22)	%	
5.	Mother education level							
	a. Non-formal	8	16	3	37.5	5	62.5	20.3
	b. Primary	25	50	10	40	15	60	df=4
	c. Secondary	15	30	7	46.6	1	53.3	S
	d. 10+2 (PUC)	1	2	4	0	1	100	
	e. Graduation	10	18	4	0	0	0	
6.	Occupation of the father							
	a. Farmer	18	36	8	44.4	9	55.5	21.5
	b. Government employee	2	4	7	50	1	50	df=3
	c. Private employee	19	38	8	42.1	11	57.8	S
	d. Self employed	7	14	5	71.4	1	28.5	
7.	Occupation of the mother							
	a. Farmer	8	16	3	37.5	3	62.5	
	b. Government employee	2	4	1	50	1	50	13.16
	c. Private employee	33	66	16	48.4	17	51.5	df=3
	d. Self employed	6	12	8	33.3	1	66.6	S
8.	Monthly Family income							
	a. Below Rs 10000	21	42	12	57.1	9	42.8	2.2
	b. Rs 10001-20000	21	42	7	33.3	8	66.6	df=3
	c. Rs20001-30000	2	4	6	50	3	50	NS
	d. Above Rs 30000	3	6	3	33.3	2	66.6	
9.	Size of the family							
	a. 2-3 members	5	10	8	60	4	40	17.76
	b. 4-5 members	25	50	11	44	9	56	df=3
	c. 5-6 members	11	22	5	45.4	6	54.5	S
	d. 7 and above	6	12	4	66.6	3	33.3	
10.	Source of health information							
	a.Print media/ news paper/books	0	0	0	0	0	0	8.91
	b.Relatives and friends	18	36	7	38.8	11	61.1	df=3
	c.Health personnel	21	42	10	47.6	11	52.3	S
	d. All of the above	10	20	6	60	4	40	

Note: S-Significant at 5% level ($p<0.05$); NS- Not significant at 5% level ($p>0.05$)

The results of Chi-square analysis presented in the table 4, shows the outcomes of association between knowledge regarding prevention of anemia with selected demographic variables. The chi square test was carried out to determine the association of knowledge regarding prevention of anemia with selected demographic variables such as Age, Religion, Education of the mother, Occupation of the mother, Family income, Type of Family, source of health information.

The knowledge on prevention of anemia was significantly associated with Age ($\chi^{2=}$11.88, df=3), Dietary pattern (16.14, df=3) Family income (χ^2=2.2, df=3), Mother education level (χ^2=20.3, df=3), occupation of the father (χ^2=21.5, df=3), Occupation of the mother (χ^2=13.16, df=3), size of the family income (χ^2=13.6, df=3),and not significantly associated with Education of the father, monthly income of the Family, at 5% (P<0.05).

Conclusion:

The main aim of the study was to assess the knowledge of adolescent girls of government primary school, regarding anemia and teach them about it. Teaching was given through a power point presentation, which helped the students to gain knowledge regarding prevention of anemia.

Thus the findings indicate that there is lack of knowledge among adolescent girls regarding anemia and information through various mean like structured teaching program is important source of improving knowledge.

References:

1. Poggiali E, Migone De Amicis M, Motta I: Anemia of chronic disease: a unique defect of iron recycling for many different chronic diseases. Eur J Intern Med 2014;25:12-17.
2. Weiss G: Pathogenesis and treatment of anaemia of chronic disease. Blood Rev 2002;16:87-96.
3. Weiss G, Goodnough LT: Anemia of chronic disease. N Engl J Med 2005;352:1011-1023.
4. Means RT Jr: Recent developments in the anemia of chronic disease. CurrHematol Rep 2003;116-121.
5. Weiss G: Iron metabolism in the anemia of chronic disease. BiochimBiophys Acta 2009;1790:682-693.
6. Weiss G, Goodnough LT: Anaemia of chronic disease. N Engl J Med 2005;352:1011-1023.
7. Zupanic K, Sucic M, BekicD:Anemia of chronic disease: illness or adaptive mechanism. Acta Clin Croat 2014;53:348-354.
8. GR Lee; V Herbert.In:Lukens J, Paraskevas P , Greer JP, Rodgers GM , editors. Wintrobe's clinical hematology. Baltimore , Maryland USA: William & Wilkins , 1998, 228 -266.
9.WHO ,Geneva , World Health Organisation ,2000