

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ANAEMIA AMONG ADOLESCENT GIRLS IN SELECTED SCHOOLS AT PEHOWA DISTRICT, HARYANA (Part-2)

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Abstract:

The present study titled “A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ANAEMIA AMONG ADOLESCENT GIRLS IN SELECTED SCHOOLS AT PEHOWA, DISTRICT KURUKSHETRA, HARYANA” was conducted in selected schools of Pehowa, Haryana which included 350 adolescent girls. The study was delimited to 6 weeks. The study included the adolescent girls who were aged between 13-18 years, attained menarche and willing to participate in the study. Those adolescents who were absent during the study period, undertaking treatment of anaemia and not willing to participate were excluded from the study.

Keywords: anaemia, knowledge, adolescent, effectiveness

The following observations were made as under:

Age wise distribution of study population

Sr. No.	Age (years)	No. of girls	Percentage
1	13	67	19.14
2	14	68	19.43
3	15	67	19.14
4	16	63	18.0
5	17	60	17.14
6	18	25	7.14
Mean±SD	15.16±1.56	350	100%

Age wise distribution of study population revealed that majority of girls had 14 years of age i.e. 19.43% followed by 67(19.14%) girls whose age was 13 and 15 years, respectively. Only 25(7.14%) girls were found to be 18 years of age. Mean age of the study population was 15.16±1.56 with a range of 13-18 years.

DEMOGRAPHIC PROFILE OF STUDY POPULATION

Table 1

Frequency and percentage distribution of demographic variables among adolescent girls (N-350)

Sr. No.	Variables	No.	%
1.	Age		
	a) 13-15 yrs	202	57.71
	b) 16-18 yrs	148	42.29
2.	Religion		
	a)Hindu	190	54.28
	b) Sikh	130	37.14
	c) others	30	8.57
3.	Parents education		
	a)Literate	270	77.14
	b) Illiterate	80	22.85
4.	Residence		
	a)Urban	240	68.57
	b) Rural	110	31.42
5.	Type of family		
	a)Nuclear	290	82.85
	b) joint	60	17.14
6.	Family income(Per month)		
	a)10000-20000	120	34.28
	B) 20000-30000	140	40.00
	C) more than 30000	90	25.71
7.	Previous knowledge on anemia		
	a) Yes	90	25.71
	b) No	260	74.28
8.	Source of information		
	a) Friends	20	5.71
	b) Family	100	28.57
	c) Books	150	42.85
	d) A-V aids	80	22.85

Table 1 shows distribution of study population according to various demographic parameters. Maximum number of girls had age between 13-15 years i.e. 202(57.71%). Majority of girls belonged to Hindu religion i.e. 190(54.28%) followed by Sikh i.e. 153(43.71%). A total of 270(77.14%) parents were found to be literate. With regard to their residential status, 240(68.57%) were living in urban areas. Majority of study population belonged to nuclear families. A total of 90(25.71%) girls had previous knowledge of anaemia. A total of 120(34.28%) girls belonged to lower income level families followed by 140(40%) who had income between 20000-30000 per month.

Table 2
Pre-test Knowledge mean score according to different questions

Questions	Mean	Standard Deviation
1	0.54	0.49
2	0.49	0.50
3	0.55	0.49
4	0.49	0.50

5	0.52	0.50
6	0.50	0.50
7	0.50	0.50
8	0.52	0.50
9	0.50	0.50
10	0.52	0.50
11	0.52	0.50
12	0.52	0.50
13	0.42	0.49
14	0.55	0.49
15	0.51	0.50
16	0.51	0.50
17	0.55	0.49
18	0.52	0.50
19	0.52	0.50
20	0.48	0.50
21	0.45	0.49
22	0.52	0.50
23	0.53	0.50
24	0.52	0.50
25	0.48	0.50
Total score	12. 83±2.58	
Range	5-20	

Table 2 shows pre-test knowledge mean score according to different questions of the study population. Mean total score of study population was 12.83±2.58 which ranged from 5-20.

Table 3
Post-test Knowledge mean score according to different questions

Questions	Mean	Standard Deviation
1	0.72	0.44
2	0.79	0.40
3	0.79	0.40
4	0.75	0.42
5	0.77	0.42
6	0.78	0.41
7	0.74	0.43
8	0.77	0.41
9	0.78	0.41
10	0.78	0.41
11	0.73	0.44
12	0.76	0.42
13	0.76	0.42

14	0.81	0.38
15	0.77	0.42
16	0.77	0.41
17	0.79	0.40
18	0.77	0.41
19	0.80	0.39
20	0.79	0.40
21	0.82	0.38
22	0.78	0.41
23	0.80	0.39
24	0.74	0.43
25	0.88	0.31
Total score	18.67±2.07	
Range	11-24	

Table 3 demonstrates post-test knowledge mean score according to different questions of the study population. Mean total score of study population was 18.67±2.07 which ranged from 11-24.

Table 4

Comparison of Pre test vs. Post-test total Knowledge score

	Pre-test	Post-test	Statistical significance
Total score	12.70±2.69	18.67±2.07	t=32.39 (p <0.001)
Range	5-20	11-24	

Table 4 illustrates comparison of pre test and post-test knowledge mean score. In pre-test it was 12.70±2.69 and in post-test, it was found to be higher i.e. 18.67±2.07. On statistical analysis, the difference among both the groups found to be statistically highly significant (p <0.001).

Table 5

Distribution of cases according to severity of anaemia

Severity of anaemia	No.	Percentage
Mild (10-12 gm%)	138	39.43%
Moderate (8-10 gm%)	34	9.71%
Severe (<8 gm%)	24	6.85%
Normal (>12 gm%)	154	44%

Table 5 shows distribution of girls according to severity of anaemia. A total of 138(39.43%) girls had mild anaemia, 34(9.71%) had moderate and 24(6.85%) had severe anaemia.

Table 6

Mean comparison of cases according to severity of anaemia

Severity of anaemia	Mild (10-12 gm%) (n=138)	Moderate (8-10 gm%) (n=34)	Severe (<8 gm%) (n=24)	Normal (>12 gm%) (n=154)
Mean	11.37	9.59	7.09	12.65
Standard deviation	0.54	0.38	0.47	0.25

Range (gm%)	10.20-12	8.90-10	6.20-7.90	12.10-13.20
Total population	11.47±1.56			
Range	6.2-13.2			

Table 6 shows mean comparison of adolescent girls according to their haemoglobin severity. A total of 138 girls had mean Hb 11.37±0.54 gm% with mild category, 34 girls had mean Hb 9.59±0.38 gm% with moderate category. A total of 24 girls were found to be severe anaemic with Mean Hb of 7.09±0.47 gm%. Overall mean Hb of study population was 11.47±1.56 gm% with a range of 6.2-13.2 gm%.

Table 7

Comparison of mean Pre test Knowledge score with Haemoglobin

	Pre-test	Haemoglobin	Statistical significance
Total score	12.70±2.69	11.47±1.56	t=7.42 (p <0.001)
Range	5-20	6.2-13.2	

Table 7 illustrates comparison of pre test and haemoglobin mean score. In pre-test it was 12.70±2.69 and in hemoglobin, it was 11.47±1.56. On statistical analysis, the difference among both found to be statistically highly significant (p <0.001).

Table 8

Comparison of mean Post test Knowledge score with Hemoglobin

	Pre-test	Hemoglobin	Statistical significance
Total score	18.67±2.07	11.47±1.56	t=36.88 (p <0.001)
Range	11-24	6.2-13.2	

Table 8 illustrates comparison of post-test and hemoglobin mean score. In post-test it was 18.67±2.07 and in hemoglobin, it was 11.47±1.56. On statistical analysis, the difference among both found to be statistically highly significant (p <0.001).

PREVIOUS KNOWLEDGE OF ADOLESCENT GIRLS REGARDING ANAEMIA ACCORDING TO DIFFERENT DEMOGRAPHIC PARAMETERS

Table 9

Previous knowledge of adolescent girls regarding anaemia according to different demographic parameters (n=90).

Sr. No.	Variables	No.	%
1.	Age		
	a) 13-15 years	48	53.33
	b) 16-18 years	42	46.66
2.	Religion		
	a) Hindu	53	58.88
	b) Sikh	27	30.00
	c) others	10	11.12
3.	Parents education		
	a) Literate	73	81.12
	b) Illiterate	17	18.88
4.	Residence		
	a) Urban	72	80
	b) Rural	18	20
5.	Type of family		
	a) Nuclear	74	82.22
	b) joint	16	17.77
6.	Family income (Per month)		
	a)10000-20000	25	27.77
	B) 20000-30000	33	36.66
	C) more than 30000	33	36.66
7.	Source of information		
	a) Friends	4	4.44
	b) Family	26	28.88
	c) Books	37	41.11
	d) A-V aids	23	25.55

In the present study, a total 90 girls had previous knowledge of anaemia. Table 9 depicts distribution of girls according to different demographic parameters.

RELATIONSHIP BETWEEN PRE-TEST KNOWLEDGE SCORES AND DEMOGRAPHIC VARIABLES

Table 10

Relationship between pre-test knowledge scores and age

Sr. No.	Age	Mean	Standard deviation
1.	13-15 years	12.79	2.54
2.	16-18 years	12.59	2.89

Table 10 shows relationship between pre-test knowledge score and age group of adolescent girls. In the present study, girls between 13-15 years of age had mean pre-test knowledge score of 12.79±2.54 which was slightly higher as compared to girls with age 16-18 years i.e. 12.59±2.89.

Table 11

Relationship between pre-test knowledge scores and religion

Sr. No.	Religion	Mean	Standard deviation
1.	Hindu	12.66	2.72
2.	Sikh	12.71	2.71
3.	Others	12.87	2.55

Table 11 shows relationship between pre-test knowledge score and religion of adolescent girls. In Hindu girls it was 12.66 ± 2.72 , in sikh girls it was 12.71 ± 2.71 and in various others it was 12.87 ± 2.55

Table 12

Relationship between pre-test knowledge scores and parent's education

Sr. No.	Parents education	Mean	Standard deviation
1.	Literate	12.58	2.66
2.	Illiterate	13.12	2.76

Table 12 depicts relationship between pre-test knowledge score and parents education of adolescent girls. It was found higher in illiterate parents as compared to literate i.e. 13.12 ± 2.76 and 12.58 ± 2.66 respectively.

Table 13

Relationship between pre-test knowledge scores and residential status

Sr. No.	Residence	Mean	Standard deviation
1.	Urban	12.77	2.60
2.	Rural	12.55	2.88

Table 13 illustrates that girls who were residing in urban areas had higher mean score as compared to rural areas i.e. 12.77 ± 2.60 as compared to 12.55 ± 2.88 respectively.

Table 14

Relationship between pre-test knowledge scores and type of family

Sr. No.	Type of family	Mean	Standard deviation
1.	Nuclear	12.71	2.73
2.	Joint	12.68	2.51

Table 14 demonstrates that girls who living in nuclear families had higher mean score as compared to joint families i.e. 12.71 ± 2.73 as compared to 12.68 ± 2.51 respectively.

Table 15

Relationship between pre-test knowledge scores and family income

Sr. No.	Family income(Per month)	Mean	Standard deviation
1.	10000-20000	12.76	2.62
2.	20000-30000	12.82	2.83
3.	More than 30000	12.45	2.55

Table 15 shows that girls whose family income was 20000-30000 had high mean score 12.82 ± 2.83 followed by 12.76 ± 2.62 whose family income was between 10000-20000.

Table 16

Relationship between pre-test knowledge scores and source of information

Sr. No.	Source of information	Mean	Standard deviation
7.	a) Friends	14	2.99
	b) Family	12.62	2.55
	c) Books	12.45	2.75
	d) A-V aids	12.93	2.59

Most of girls obtained knowledge through their friends i.e. the mean score was 14 ± 2.99 followed by 12.93 ± 2.59 who received information from audio-visual aids.

Table 17

Relationship between pre-test knowledge scores and severity of anaemia

Sr. No.	Severity of anaemia	Mean	Standard deviation
1.	Mild (10-12 gm%)	11.87	2.64
2.	Moderate (8-10 gm%)	13.44	2.88
3.	Severe (<8 gm%)	12.44	2.50
4.	Normal (>12 gm%)	12.91	2.78

Table 17 depicts that girls who were moderate anemic had mean score of 13.44 ± 2.88 followed by 12.91 ± 2.78 who were found to be normal.

Table 18

Relationship between pre-test knowledge scores and knowledge of anaemia

Sr. No.	Previous knowledge of anaemia	Mean	Standard deviation
1.	Yes	13.05	2.72
2.	No	12.58	2.67

Table 18 illustrates that those girls who had previous knowledge of anaemia had higher pre-test knowledge score i.e. 13.05 ± 2.72 .

EFFECT OF SOCIO-ECONOMIC FACTORS WITH ANAEMIA

Table 19

Effect of Religion with anaemia

Sr. No.	Religion	Mild (10-12 gm%)	Moderate (8-10 gm%)	Severe (<8 gm%)	Normal (>12 gm%)	Statistical analysis (Chi-square analysis)
1.	Hindu	72	19	12	87	5.64, df=6, p=0.464 (p >0.05 NS)
2.	Sikh	48	11	11	42	
3.	Others	18	4	1	25	

Table 19 shows effect of religion with anaemia. On statistical analysis, the difference among all anaemic categories found to be comparable and thus statistically insignificant (p >0.05, NS).

Table 20

Effect of Parents education with anaemia

Sr. No.	Parents education	Mild (10-12 gm%)	Moderate (8-10 gm%)	Severe (<8 gm%)	Normal (>12 gm%)	Statistical analysis (Chi-square analysis)
1.	Literate	99	8	22	142	40.59, df=3, p=0.000 (p <0.001 Sig.)
2.	Illiterate	39	26	2	12	

Table 20 depicts effect of parents education regarding anaemia. On statistical analysis, the difference among literate and illiterate parents with anaemic categories found to be statistically significant (p <0.001).

Table 21

Effect of residential status with anaemia

Sr. No.	Residence	Mild (10-12 gm%)	Moderate (8-10 gm%)	Severe (<8 gm%)	Normal (>12 gm%)	Statistical analysis (Chi-square analysis)
1.	Urban	99	19	19	103	4.63, df=3, p=0.200 (p >0.05 NS)
2.	Rural	39	15	5	51	

Table 21 illustrates in the present study that girls living in urban areas were found to be more as compared to rural areas, but on statistical analysis, the difference found to be comparable and thus statistically insignificant (p >0.05, NS).

Table 22

Effect of type of family with anaemia

Sr. No.	Type of family	Mild (10-12 gm%)	Moderate (8-10 gm%)	Severe (<8 gm%)	Normal (>12 gm%)	Statistical analysis (Chi-square analysis)
1.	Nuclear	118	26	21	125	2.33, df=3, p=0.506 (p >0.05 NS)
2.	Joint	20	8	3	29	

Table 22 illustrates in the present study that girls living in nuclear families were found to be more as compared to joint families, but on statistical analysis, the difference found to be comparable and thus statistically insignificant (p >0.05, NS).

Table 23

Effect of family income with anaemia

Sr. No.	Family income (Per month)	Mild (10-12 gm%)	Moderate (8-10 gm%)	Severe (<8 gm%)	Normal (>12 gm%)	Statistical analysis (Chi-square analysis)
1.	10000-20000	51	14	6	59	11.85, df=6, p=0.06 (p >0.05 NS)
2.	20000-30000	49	19	10	62	
3.	More than 30000	38	1	8	43	

Table 23 shows that there was no significant relationship between family income with anaemia (p >0.05, NS).

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