



A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Prevention of Anemia Among Menstruating Adolescence Girls in Selected High Schools at Karad

KEYWORDS

Planned teaching ,knowledge of prevention of anemia and adolescence

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ABSTRACT *Background-* World interest in adolescent health issues has grown dramatically in the post decade beginning with the international year of youth in 1985 and the World Health Assembly in 1989, when discussions were focused on the health of youth. The prevalence of anemia is disproportionately high in developing countries due to poverty, inadequate diet, certain diseases, pregnancy / lactation and poor access to health services. **Methods-** The study was conducted on 100 menstruating adolescence girls of Mahatma Gandhi Vidyalyaya Kale, Karad. The simple random sampling technique was used to select the samples. The instrument used for data collection was a structured knowledge questionnaire and data were collected by self reporting method. The obtained data was tabulated and analyzed in terms of objective of the study, using descriptive and inferential statistics. **Results - The major findings of the study were:** The data on sample characteristics revealed that, majority of the subjects, 44 (44%) who participated in the study were 15 years old of age, 52 (52%) were from nuclear family background, 70 (70%) mothers education level was also secondary, majority of the mother 83 (83%) were house wife, 55 (55%) were between Rs. 5000-15000 monthly income of family, 84 (84%) takes mixed type of diet. Paired 't' test value revealed that there was significant gain in knowledge score of menstruating adolescence girls after administering planned teaching program at 0.05 level of significance. **Conclusion-** The study concluded that a planned teaching program on prevention of anemia administered to the menstruating adolescence girls of Mahatma Gandhi Vidyalyaya Kale, Karad, was effective by increasing the knowledge of subject under study.

INTRODUCTION-

"The adolescent girl still remains a neither young plant that gets light nor water. She remains the flower that could have blossomed but didn't...."

Kamla bhasin from "Our daughters"

An adolescent girl in the total population of a country has special significance from economic psychological and social point of view. An adolescent population especially girl has important bearing on the expected demographic social and psychological makeup and profile of the country. Adolescent health is a period of transition between childhood and adulthood and is a significant period of human growth and maturation.¹ Adolescence is the age between 10-19 years (WHO) According to WHO the definition of health actually means, "The complete state of physical, mental, spiritual, cultural well being and not merely absence of disease or infirmity. Adolescent groups are extremely important producers who will form the main work force of India tomorrow. Adolescents constitute a vulnerable group, potential exposure to greater risk of morbidity and mortality due to early marriages. Nutrition plays a dominant role in all aspects of life. Because of the improper nutrition disorders like anemia occur which further leads to many deficiencies and which are at high risk. Anemia is a wide spread public health problem where, little progress has been reported and the global prevalence of anemia remains unacceptably high. A major health consequence of anemia include impairment of physical mental and motor development 5 to 10

points deficit in IQ, Poor school performance, pre-maturity, LBW and mortality. The main cause of anemia is iron deficiency due to inadequate intake of bio- available iron from the diet. Iron deficiency anemia affects more than 40% of women of reproductive age in the developing world. Prevalence of anemia among adolescents is more than 25% in developing countries and 7-12% in developed countries. (W.H.O. 2004). India has probably the highest prevalence of nutritional anemia adolescent girls. According to one estimate, 60-70% of the Indian adolescent girls are anemic. Adolescence is second only to infancy as the period of most rapid growth. Adolescents are vulnerable to both macro and micronutrient deficiencies. Adolescent girls are particularly vulnerable groups as their requirement of iron as well as its loss from the body is high, which may be due to the blood loss during menstruation. A cross sectional study identified the prevalence of anemia among the girls of K.V. Kuppam, North Arcot, Ambedkar Dist of Tamilnadu to be 40.7% in pre menorrhoeal girls as compared to 45.2% in post menorrhoeal girls. Programs for anemia control, targeted at adolescent girls and health care of adolescent girls all over the world have not been given priority. Since the anemic status of these adolescent girls is found to affect their offspring care during this period is likely to pay rich dividends. There are 300 million young people in India aged 10-24. They comprise 30% of India's total population.

MATERIALS AND METHODS-

The research investigator obtained ethical clearance and

formal permission from the principal of high school. The investigator explained the purpose of the study to participants. Informed consent was taken from each participant. A quasi experimental one group pre-test and post-test design with an evaluative approach was utilized to test the proposed hypothesis. The study sample (n=100) menstruating adolescent girls of high school of Kale, Karad. Simple random sampling technique was utilized. The data was analyzed using both descriptive and inferential statistics. The descriptive statistics used were frequency and percentage distribution of sample characteristics and competition of mean, standard deviation, mode, median and range of the pre-test and post-test knowledge scores in different areas knowledge of prevention of anemia. Inferential statistics used were paired-t test and competition of 'p' values to evaluate the effectiveness of planned teaching programme. Unpaired t test to find the association of pre-test knowledge scores with selected demographic variables. The level of significance for testing the research hypothesis was 0.05.

RESULTS-

Table No- 1: Frequency and percentage distribution of menstruating adolescence girls According to socio demographic variable. N=100

| Sr. No | Variables | Frequency (F) | Percentage (%) |
|--------|--------------------------|---------------|----------------|
| 1. | Age in years | | |
| a | 13 | 02 | 02% |
| b | 14 | 36 | 36% |
| c | 15 | 44 | 44% |
| d | 16 | 18 | 18% |
| 2. | Religion | | |
| a | Hindu | 83 | 83% |
| b | Muslim | 10 | 10 % |
| c | Christian | 02 | 02% |
| d | Others | 05 | 05% |
| 3. | Type of Family | | |
| a | Nuclear | 52 | 52% |
| b | Joint | 48 | 48% |
| 4. | Education of father | | |
| a | Illiterate | 02 | 02% |
| b | Primary | 16 | 16% |
| c | Secondary | 50 | 50% |
| d | Higher Secondary | 32 | 32% |
| 5. | Education of mother | | |
| a | Illiterate | 03 | 03% |
| b | Primary | 11 | 11% |
| c | Secondary | 70 | 70% |
| d. | Higher Secondary | 16 | 16% |
| 6. | Fathers occupation | | |
| a | Business | 06 | 06% |
| b | Service | 28 | 28% |
| c | Farmer | 64 | 64% |
| d | Other | 02 | 02% |
| 7. | Mothers occupation | | |
| a | House wife | 83 | 83% |
| b | Business | 07 | 07% |
| c | Service | 00 | 00% |
| d | Farmer | 10 | 10% |
| 8. | Monthly income of family | | |
| a | Below Rs.5,000 | 26 | 26% |
| b | Rs.5,000-15,000 | 55 | 55% |
| c | Rs.15,000-25,000 | 13 | 13% |
| d | Rs. 25,000-35,000 | 04 | 04% |
| e | More than Rs. 35,000 | 02 | 02% |

| | | | |
|-----|----------------------|----|-----|
| 9. | Total family members | | |
| a | less than 4 | 25 | 25% |
| b | 05-08 | 46 | 46% |
| c | 09-10 | 14 | 14% |
| d | More than 11 | 15 | 15% |
| 10. | Diet of family | | |
| a | Vegetarian | 16 | 16% |
| b | Mixed | 84 | 84% |

The data presented in Table 1 indicates that:-Majority of the subject 44 (44%), belonged to age 15 years, 83 (83%), belonged to Hindu religion, 52 (52%), belongs to nuclear family where as the minimum number of subjects 48 (48%) belonged to joint family, 16 (16%) had primary education, 64 (64%), were farmer, 83 (83%) were a house wife , 55 (55%) were had their family income 5000 and more than 15000 per year ,84 (84%) had a mixed diet where as minimum number of subjects 16 (16%) had a vegetarian diet.

Table - 2:Frequency and percentage distribution of knowledge scores of menstruating adolescence girls of high schools regarding prevention of anemia. N=100

| Knowledge score | Pre test | | Post test | |
|-----------------|---------------|----------------|---------------|----------------|
| | Frequency (F) | Percentage (%) | Frequency (F) | Percentage (%) |
| Good | 12 | 12% | 19 | 19% |
| Average | 74 | 74% | 70 | 70% |
| Poor | 14 | 14% | 11 | 11% |

In pre test majority of subjects 74 (74%) had average Knowledge, 14(14%) had poor knowledge, and 12(12%) had good knowledge where as in post test majority of subjects 70 (70%) had average Knowledge, 19(19%) had good knowledge, and 11(11%) had poor knowledge.

Table - 3 Association between the knowledge scores of subjects with their selected demographic variables. N=100

| Sr. No | Demographic Variables | Subject No. | Pre test Mean± SD | Post test Mean± SD | Paired t value | P value |
|--------|-----------------------|-------------|-------------------|--------------------|----------------|---------|
| 1 | Age | | | | | |
| a | <15 | 38 | 14.6±2.8 | 20.6±2.1 | 14.1 | <0.0001 |
| b | ≥15 | 62 | 14.9±3.0 | 20.6±2.9 | 14.9 | <0.0001 |
| | Unpaired 't' value | | 0.5 | 0.3 | | |
| | p value | | 0.3024 | 0.3724 | | |
| 2. | Religion | | | | | |
| a | Hindu | 83 | 15.1±2.7 | 20.7±2.4 | 19.4 | <0.0001 |
| b | Others | 17 | 14±2.8 | 19.2±2.3 | 8.5 | <0.0001 |
| | Unpaired 't' value | | 1.5 | 2.2 | | |
| | p value | | 0.0676 | 0.0142 | | |
| 3. | Type of family | | | | | |
| a | Nuclear | 52 | 14.6±2.7 | 20.2±2.8 | 14.7 | <0.0001 |
| b | Joint | 58 | 15.2±2.8 | 20.7±2.5 | 15.6 | <0.0001 |
| | Unpaired 't' value | | 1.7 | 0.90 | | |
| | p value | | 0.129 | 0.18 | | |
| 4. | Education of father | | | | | |
| a | <Secondary | 18 | 14.2±2.8 | 19.8±3.2 | 9.0 | <0.0001 |
| b | ≥Secondary | 82 | 15.6±2.7 | 20.6±2.5 | 18.9 | <0.0001 |
| | Unpaired 't' value | | 1.072 | 1.210 | | |
| | p value | | 0.1432 | 0.1146 | | |
| 5. | Education of mother | | | | | |

| | | | | | | |
|----|--------------------------|----|----------|----------|------|---------|
| a | <Secondary | 14 | 13±2.8 | 19.1±3.1 | 5.7 | <0.0001 |
| b | ≥Secondary | 86 | 15.2±2.6 | 20.7±2.5 | 18.8 | <0.0001 |
| | Unpaired 't' value | | 2.8 | 0.6 | | |
| | p value | | 0.0025 | 0.25 | | |
| 1. | Monthly income of family | | | | | |
| a | <15,000 | 81 | 14.8±2.7 | 20.4±2.7 | 16.6 | <0.0001 |
| b | ≥15,000 | 19 | 15.3±3.0 | 1.9 | 9.6 | <0.0001 |
| | Unpaired 't' value | | 0.73 | 0.55 | | |
| | p value | | 0.2318 | 0.2909 | | |
| 2. | Diet of family | | | | | |
| a | Mixed diet | 84 | 14.9±2.7 | 20.4±2.7 | 18.6 | <0.0001 |
| b | Vegetarian diet | 16 | 14.6±3 | 21.0±2.4 | 11.4 | <0.0001 |
| | Unpaired 't' value | | 0.4716 | 0.8876 | | |
| | p value | | 0.3191 | 0.1885 | | |

Table Shows that as age is increased the knowledge score also increased but the increases was not statistical significant. In other socio demographic factors like type of family, education of father, monthly family income, diet of family there was significant difference in pre test and post test knowledge scores. ($P < 0.0001$). However in pre test knowledge score all 'p' values were considered not significant at 0.05 level except the religion and education of mothers as socio demographic variables. In religion pre test knowledge score 'p' value was 0.0676 so it was slightly considered significant at 0.05 level while for education of mother Pre test knowledge score was 0.0025 so it was considered highly significant at 0.05 level. So there were positive effect of planned teaching program regarding prevention of anemia. But no association between knowledge score of age, type of family, education of father, monthly income of family, diet and there was slightly association between religion and pre test knowledge score and most significant association between education of mothers and pretest knowledge scores.

Discussion:

Findings related to demographic variables of menstruating adolescent girls:

In present study majority of the adolescence girls 44 (44%) belonged to the age 15 years. These findings are similar to the findings of study conducted by 'T Nirmala' and 'P Satya' where majority of adolescence girls 40.9 % belonged to the age 15 years. Majority of adolescence 83 (83%) belongs to Hindu religion whereas in 'S Kamalam' study it was high. Majority of adolescence girls father 50(50%) completed secondary education whereas in S Kamlam study majority of adolescence girls father 83(83 %) completed secondary education. Majority of adolescence girls father 64(64 %) were farmer and monthly income of this 55 (55%) were Rs.5000-15000 & below Rs.5000 were 26(26%). Majority of adolescence girls 10 (10%) attained menarche at the age of 12 years.& most of girls 47 (47%) had attained menarche at the age of 13 years.

Findings related to knowledge score of menstruating adolescence girls in the areas of prevention of anemia:

The analysis of knowledge reveals that in the pre test over all mean score was 15 with standard deviation+ 3.3 and in post test the overall means score was 21 with standard deviation + 2.8 with mean difference 5.59 and 0.14re-

spectively. This shows that subjects gained knowledge adequately about prevention of anemia.

Findings related to knowledge score of adolescence girls and their demographic variables:

Positive effect of planned teaching program on knowledge scores but no association between pre test knowledge scores of age, type of family, education of father, monthly income of family, diet there was slightly association between religion & pretest knowledge score and most significant association between education of mothers and pre test knowledge scores. The findings were similarly study conducted by S Kamlam. The study findings revealed that there is a relationship between the prevalence of anemia with religion, caste, type of toilet used, occupation of fathers, mother and income of the family, age at menarche, duration of bleeding, hygienic practices plays a significant role.

CONCLUSION- Based on the analysis of findings of the study, the following inference was drawn. There was evident increase in the knowledge scores in all the area included in the study after administration of the planned teaching programme. The actual gain score was significantly higher in the area of knowledge of prevention of anemia. The religion of adolescence girls shared statically slightly significant and education mother have highly significant association between their pre-test knowledge scores. Thus it is concluded that the planned teaching programme on prevention of anemia was effective as a teaching strategy.

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