Original Research Paper

Health Science

A STUDY TO ASSESS THE KNOWLEDGE REGARDING UTILIZATION OF IRON IN DIETS THROUGH FOOD BASED APPROACHES FOR THE CONTROL OF IRON DEFICIENCY ANEMIA AMONG THE ADOLESCENT SCHOOL GOING GIRLS OF SELECTED COMMUNITY OF DELHI, NCR.

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ABSTRACT   **AIM:** A Study to Assess the Knowledge regarding utilization of Iron in diets through food based approaches for the control of Iron Deficiency Anemia among the Adolescent School Going Girls of selected community of Delhi, NCR

METHODOLOGY: Non Experimental descriptive survey design was adopted in the present study. Non probability Convenience Sampling technique was used to select the sample size of 100 Adolescent School Going Girls of selected community of Delhi, NCR. The assessment of knowledge of Adolescent School Going Girls was carried out using a structured knowledge questionnaire regarding utilization of Iron in diets through food based approaches for the control of Iron Deficiency Anemia.

RESULTS: Assessment of the knowledge scores revealed that maximum (90%) Adolescent School Going Girls were having good knowledge, less (10%) were having average knowledge regarding utilization of iron deficiency anemia. Chi-square test was used to find the association between knowledge score with selected demographic variables. The results indicated there is no significance association between the level of scores and other demographic variables of Adolescent School Going Girls. The knowledge score Adolescent School Going Girls was assessed in seven different areas i.e. Meaning of Iron Deficiency Anaemia, Risk factor, Causes of Iron Deficiency Anaemia, sign and symptoms, diagnosis, Utilization of Iron in diets through food- based approaches, Food Hygiene, Cooking methods for the control of Iron Deficiency Anaemia and Complications due to Iron Deficiency Anaemia.

CONCLUSION: The findings of the study depicts that most of Adolescent School Going Girls had good knowledge, few had average knowledge regarding utilization of Iron in diets through food based approaches for the control of Iron Deficiency Anemia among the Adolescent School Going Girls of selected community of Delhi, NCR

INTRODUCTION:-
BACKGROUND OF THE STUDY

Iron-deficiency anemia (IDA) among women in India is a problem of major public health significance. Using data from three waves of the National Family Health Survey, this article discusses the burden of and trend in IDA among women in India, and discusses the level of iron and folic acid (IFA) supplementation and its potential role in reducing the burden of IDA. Between 2005–2006 and 2015–2016, IDA in India decreased by only 3.5 percentage points (from 56.5% in 2005–2006 to 53.0% in 2015–2016) for women aged 15–49 years. However, during the same period, of 27 states compared, IDA increased in eight: Delhi, Haryana, Himachal Pradesh, Kerala, Meghalaya, Tamil Nadu, Punjab and Uttar Pradesh; furthermore, some of these (e.g. Kerala) are states that rank among the highest on the state Human Development Index but had failed to contain the burden of IDA. The IFA intervention appears to be ineffective in reducing the burden of IDA in India (nationally only 30.3 % of mothers consumed IFA for 100 days or more when they were pregnant), probably due to irregular consumption of IFA where the provision of screening under the National Iron+ Initiative scheme appears to be unsuccessful. To strengthen the IFA intervention and its uptake, a concerted effort of community-level health workers (accredited social health activists, auxiliary nurse midwives and anganwadi workers) is urgently needed. [7]

Anemia accounts for a majority of the nutritional problem across the globe. The prevalence of anemia is inordinately higher among developing nations, because of low socioeconomic status and indigent access to the healthcare services. Adolescent period is signalized by marked physical activity and rapid growth spurt; therefore they need additional nutritional supplements and are at utmost risk of developing nutritional anemia. This study was carried out to find out the prevalence of anemia among adolescent girls. This study was a cross-sectional study conducted among 255 adolescent girls. After getting informed consent from the subjects, the information regarding age, sociodemographic status, menstrual history, and short clinical details were recorded.[8]

Blood samples were collected and analyzed using automated hematology analyser. Overall prevalence of anemia was found to be 48.63% (*n* = 124). The majority of the anemic girls (55.64%, *n* = 69) were having mild degree of anemia. Among 255 girls, 188 (73.73%) were from the early adolescent age group (10–14 years). Prevalence of anemia (52.24%) was high among the late adolescents and those belonging to low socioeconomic class. There is a significant relationship between anemia and socioeconomic status, dietary modification, nutritional supplementation, and helminth control; in addition, compliance with consumption of iron and folic acid tablets will prevent anemia to a great extent among adolescent girls[9]

NEED FOR THE STUDY:-

Anemia is estimated to contribute to more than 115,000 maternal deaths and 591,000 perinatal deaths globally per year. There are about 1.2 billion adolescents in the world, which is equal to 1/5th of the world's population and their numbers are increasing. Out of these, 5 million adolescents are living in developing countries (International Letters of Natural Sciences 2 (2015) 24-32 -25-. Out of 1 billion total Indian populations, 21% are adolescents. [10]

The world's adolescent population is facing a series of serious nutritional challenges which are not only affecting their growth and development but also their livelihood as adults. Yet, adolescents remain a largely neglected, difficult- to- measure and hard -to-reach population, in which the needs of adolescent girls in particular, are often ignored. [11] Therefore the investigator thought that Nutritional Anemia is the most frequent maternal complications during pregnancy, so antenatal care should be concerned with its early detection and management.

STATEMENT OF THE PROBLEM:-

A study to assess the knowledge regarding utilization of Iron in diets through food based approaches for the control of Iron deficiency anemia among the Adolescent school going girls of selected community of Delhi, NCR with a view to develop an informational video on improving utilization of Iron in diets with the following objective:
1. To assess the level of knowledge regarding utilization of iron in diets through food-based approaches for the control of Iron deficiency Anaemia among the adolescent school going girls.

RESEARCH METHODOLOGY:-

A Non Experimental descriptive survey design was adopted in the present study. Non probability Convenience Sampling technique was used to select the sample size of 100 Adolescent School Going Girls of selected community of Delhi, NCR. The assessment of knowledge of

Adolescent School Going Girls was carried out using a structured knowledge questionnaire regarding utilization of Iron in diets through food based approaches for the control of Iron Deficiency Anemia

A validated structured self administered questionnaire was developed to gather the demographic data and to assess the knowledge of Adolescent School Going Girls regarding Meaning of Iron Deficiency Anaemia, Risk factor, Causes of Iron Deficiency Anaemia, sign and symptoms, diagnosis, Utilization of Iron in diets through food- based approaches, Food Hygiene, Cooking methods for the control of Iron deficiency anaemia and Complications due to Iron Deficiency Anaemia related to utilization of Iron in diets through food based approaches for the control of Iron Deficiency Anemia

The reliability co-efficient for the structured knowledge questionnaire was calculated by using the Split half method. The reliability co-efficient was found to be 0.739, thus the tool was found to be reliable.

Ethical approval was taken from the Principal of Amity College of Nursing to conduct the study. Written informed consent was taken from the study sample regarding their willingness to participate in the research study and the purpose for carrying out research study was explained to the participants. Confidentiality of the information of the sample was maintained.

Data was analyzed by descriptive and inferential statistics i.e. frequency and percentage distribution, mean percentage, median of knowledge scores.

RESULT:-
Frequency and percentage distribution of Adolescent School Going Girls according to demographic data. In the present study, Data given in Table 1 shows that the demographic characteristics of Adolescent School Going Girls, According to age group, some of the girls (7%) belonged to age group of 11 to 13years, 14 to 16 (33%) and 17 to 19 years (60%). According to religion majority of Adolescent School Going Girls were Hindus (80%) and Muslims (20%). According to standard of education of Adolescent School Going Girls,5% of the girls belonged to class 9th, 42% girls belonged to class 10th and 53% belonged to class 11th.

According to educational status of mother of Adolescent School Going Girls some were (2%) Primary, (25%) Secondary (27%) Higher secondary and (46%)was Graduated and Above. According to family income some families belonged (29%) 10,001 – 30,000 Rs., (36%) 30,001 – 50,000 and (35%) >50,001Rs.According to Age of the first menses, some of the Adolescent School Going Girls started with their first menses in the age group of <10 years (5%), 11-12 years (65%) and 13-15 years (30%).

According to ever experienced unbearable pain during your menses, (29%) of Adolescent School Going Girls experienced unbearable pain and (71%) of Adolescent School Going Girls did not experience. According to having regular menses between 28-35 days every month, (97%) of Adolescent School Going Girls said yes and (3%) of Adolescent School Going Girls said no. According to Birth Order of Adolescent School Going Girl in the family, some were eldest (29%), middle (44%) and youngest (27%).

According to have any knowledge regarding Iron Deficiency Anemia, (93%) girls said yes and (7%) said No. According to what is the source of information, (45%)Some of the Adolescent School Going Girls got the knowledge from Parents and relatives, (12%) peer group, (21%)Internet or Mass Media and (15%)Health Workers.
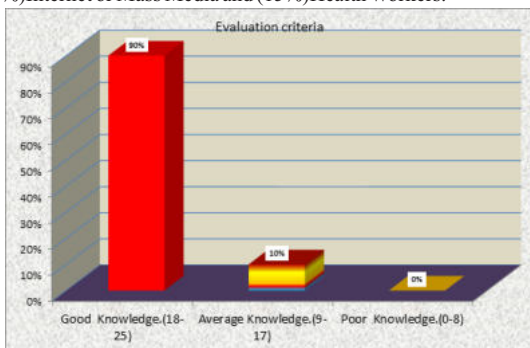
Figure 1:- Frequency and Percentage Distribution of Adolescent School going girls Based on Knowledge Scores Categories

Table -1 Mean, Median, Standard Deviation and Mean Percentage of Knowledge Score of Adolescent School going girls. **N=100**

Descriptive Statistics	Range	Mean	Median	S.D.	Mean %
Knowledge Score	15-23	19.74	20	1.70	78.96

Maximum Score=25 Minimum Score=0

Table 1: The present study represents the Mean, Median, Standard Deviation (SD) and mean percentage of knowledge score of the Adolescent School going girls regarding the utilization of Iron in diets in which the Range of knowledge score were in between 15-23, Mean 19.74, Median 20, standard deviation (SD) of 1.70 and of mean percentage 78.96.

DISCUSSION:-
The present study shows that the majority (90%) of Adolescent school going girls were having Good knowledge which was similar to the findings of the study conducted by Niba Johnson; et al, a Non experimental descriptive study to determine the knowledge of 100 adolescent girls regarding prevention of iron deficiency anemia among adolescent girls from which showed that the majority (84%) of the study sample had moderately adequate knowledge on prevention of iron deficiency anemia so it is advisable to provide educational programs for the adolescent girls regarding iron deficiency anemia.

CONCLUSION:-
The present study assessed the knowledge of adolescent school going girls regarding utilization of iron in diets through food-based approaches for the control of Iron deficiency Anemia. The results revealed that about 90% of the adolescent school going girls have good knowledge, 10% of adolescent school going girls have average knowledge.

REFERENCES:-
1. Abha Choudhary ,etal 92006, prevalence of anaemia. The royal society of medicine, Press Limited. July 2008,vol-36,p.166-169.
2. Sajjan TJ. Consumption pattern of green leafy vegetables and impact of nutrition education on Haemoglobin status of rural adolescent girls (online). 2008 August; Available from: URL: http://etd.uasd.edu/ft/th9661.pdf
3. Saibaba, A.etal. Nutritional Status of Adolescent Girls of Urban Slums, Indian Journal of Community Medicine, 2002, 27(4) : 151-56.
4. Hillary Creed et.al ,Anaemia in Adolescent Girls through Community Kitchens in a Peri urban Population of Lima, Peru, (2003) vol. 130 no. 2 4595-4615
5. Ida Tidemann- Anderson, Hedwig Acham. Iron and sinc content of selected foods in the diet of adolescence in kumi district east Uganda. 2011. J Nutr,2003 (133) ; 1064- 1069.
6. ShradaSidhu, Kanta Kumari, Prevalence of anaemia among adolescent girls Punjab, Anthropologist 7(4)-265-267.