A CROSS SECTIONAL STUDY TO ASSESS THE KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING PREVENTION OF ANAEMIA AMONG SCHOOL GOING ADOLESCENTS IN CHENNAI, TAMIL NADU - 2015

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Abstract : BACKGROUND - Adolescence is a period of transition from childhood to adulthood. During this period in life there is a significant increase in nutritional requirements, especially for iron. Anaemia, a manifestation of under-nutrition and poor dietary intake of iron is a public health problem among adolescents. Anaemia in India primarily occurs due to iron deficiency.

OBJECTIVES - To assess the knowledge, attitude and practice regarding prevention of anaemia among the school children aged 11 to 15 years in Chennai and the influencing sociodemographic factors.

MATERIALS AND METHODS - A Cross-sectional study conducted at Schools of Chennai among school going adolescents aged 11-15 years with a sample of 345 participants for the period from Dec 2015 to Jan 2016. Data analysis was done by using Chi square test.

RESULTS - In this study 104 participants (30.1 percent) had better knowledge about iron rich foods and the gap between the knowledge and practice were found to be statistically significant (P value less than 0.001). In this study 145 (42 percent) participants had knowledge about WIFS programme. 208 (60.2 percent) had good attitude that anaemia can be prevented by eating green leafy vegetables, as it is rich in iron. In this study 120 (34.7 percent) participants were taking iron rich sources at frequent intervals. Those who are taking weekly iron tablets under WIFS programme was 60.2 percentage (208 participants).

CONCLUSION: In this study there is no association between sociodemographic profile and knowledge, attitude, practice of prevention of iron deficiency anaemia. It implies that all anaemia prevention programmes should focus on children irrespective of their sociodemographic profiles. Although attitude regarding intake of iron rich foods is good among adolescents, knowledge and practice are low. So we should give them adequate nutritional education about iron rich foods and encourage them to consume iron rich foods. In this study coverage of WIFS programme is 60 percentage. We have to improve and strengthen the existing WIFS programme to cover all vulnerable adolescents.

Key Words: Adolescents, Anaemia, Iron Rich Foods, Knowledge

INTRODUCTION:
Prevention is better than cure
Adolescence is a period of transition from childhood to adulthood. It is characterised by rapid physical, biological and hormonal changes resulting in psycho-social, behavioural and sexual maturity in an individual. It is the second growth spurt of life and both boys and girls undergo different experiences in this phase. During this period in life there is a significant increase in nutritional requirements, especially for iron. Anaemia, a manifestation of under-nutrition and poor dietary intake of iron is a public health problem, not only among pregnant women, infants and young children but also among adolescents. Anaemia in India primarily occurs due to iron deficiency and is the most widespread nutritional deficiency disorders in the country today. According to NFHS 43 data, in Tamilnadu 53.9% (urban) and 56.9% (rural) of non pregnant women (15-49 years of age) are anaemic. Iron deficiency anaemia can result in diminished work capacity and reduced physical performance. During adolescence, iron deficiency anaemia can result in impaired physical growth, poor cognitive development, reduced physical fitness and work performance and lower concentration on daily tasks. Iron deficiency in adolescent girls influences the entire life cycle. Anaemic girls have lower pre pregnancy stores of iron and pregnancy is too short to build iron stores to meet the requirements of the growing fetus. Anaemic adolescent girls have a higher risk of preterm delivery and having babies with low birth weight. Regular consumption of iron-folic acid supplements along with a diet rich in micronutrients is essential for prevention of iron deficiency anaemia in adolescent girls and boys.

OBJECTIVES
1. To assess the knowledge attitude and practice regarding prevention of anaemia among the adolescents in school aged 11 to 15 years in Chennai.
2. To find out the gap between knowledge and practice regarding prevention of anaemia and sociodemographic factors influencing them.

JUSTIFICATION
• Adolescents in India, account for one-fifth of the total population and are a significant human resource that needs to be given ample opportunity for holistic development towards achieving their full potential. Not only are needs of the adolescents related to their physical development, but also to their emotional and psycho-social development.
• Early adolescence is a time of major physical, cognitive and psychological growth and development.
METHODS AND MATERIALS

Study Design: Cross-sectional study.

Study Place: Corporation Schools of Chennai

Study Population: School-going adolescents 11-15 years

Study Duration: December 2015 to January 2016

Sample Size: The sample size was calculated based on the findings of a study of knowledge, attitude, practice about anaemia among adolescents girls in urban slums of Davangere city Karnataka by Navinkumar Angadi A. Ranijitha, where the overall percentage of awareness regarding prevention of anaemia in adolescents was 55%. Considering Confidence level of 95%, relative precision of 10% with 10% excess sampling to account for non-response, the sample size derived was 345. Sample size was calculated using the formula: \( N = \frac{Z_{a}^{2}pq}{d^{2}} \) Where, \( Z_{a} \) standard normal deviant at 95% confidence level i.e. 1.96, \( p \) = percentage of awareness regarding prevention of anaemia = 55%, \( q \) = 100-p, \( d \) = relative precision of 10%. Allowing a 10% non-response rate the sample size comes around 345

Sampling Method: Multistage sampling method will be used.

First Stage: Chennai Corporation has 3 regions. One region was selected by simple random sampling by lot method from 3 regions in Chennai.

Second Stage: Each region has 5 zones. One school was selected from each zone. So totally 5 schools were selected by simple random sampling by lot method.

Third Stage: From each selected school 70 students were selected by simple random sampling method to get the required sample size.

Inclusion Criteria: Those who are all willing to participate the study.

Exclusion Criteria: Students who are sick and unable to answer.

Tool: One to one interview with semi-structured questionnaire.

The questionnaire contains basic socio demographic profile, knowledge about consumption of iron rich foods, iron and folic acid tablets, practice related questions and also include the details of awareness of the Weekly Iron and Folic acid Supplementation Programme. Official permission to conduct the study was obtained from the School authorities and from the Institutional Ethics committee. After obtaining the informed consent from the parents of the participants that the semi-structured questionnaire was administered to them.

Analysis: The data was entered in MS Excel and analyzed using SPSS Version 16 for appropriate descriptive and inferential statistics with chi-square test.

RESULTS: The study included 345 respondents selected randomly from 5 schools of Chennai corporation among them 77 respondents (21.1%) belonged to 15 years of age. Mean age was 13 years with standard deviation 0.9. The social demographic details of the respondents are shown in table 1.

Knowledge: Among 345 participants 104 (30.1%) had knowledge about iron rich sources (eg. green leafy vegetables). 178 (51.5%) had the knowledge about hygienic practices (eg. wearing chapals) to prevent anaemia. 138 (40%) knew about the deworming tablets. 121 (35%) knew the symptoms of anemia. 132 (38.3%) knew about the causes of anaemia. 145 (42%) knew about the weekly IFA tablets. 167 (48.4%) knew regular check up of anaemia (health check up and Hb estimation). Table 2. 162 (46.9%) knew about the treatment of anaemia.

Attitude: Among the study participants, 173 (50.1%) are of the opinion that Nutritional deficiency is the major cause for anaemia. 243 (70.4%) have opinion that anaemia is related to hygienic practices. 208 (60.2%) had good attitude that anaemia can be prevented by eating green leafy vegetables, as it is rich in iron and 138 (40%) have agreed that health education and reinforcement to take iron folic acid tablets will improve their compliance (Table 3).

Practice: 120 (34.7%) had taken iron rich foods at regular intervals. 208 (60.2%) had good hygienic practices relevant to prevention of anaemia. 185 (53.6) had taken deworming tablets at 6 months interval regularly. 208 (60.2%) had the practice of WIFS. 137 (39.7%) participants have practices about regular check up of Anaemia. (Table 4)

Association between knowledge and practice: Table 5: Relationship between knowledge and practices in taking iron rich foods.
The knowledge of the subjects was associated with practices of them in the above table-5. The knowledge was associated with the practice of taking iron rich foods. Those who were having knowledge and practice were only 22.6% and not having both was 57.7%. The above two associations were statistically very highly significant (p<0.001). Table 6: Relationship between knowledge and practices in Hygienic practices. The Knowledge and practice of hygienic practices were associated in the above table-6. The results states that the both did not associated (p>0.05).

Table 7: Relationship between knowledge and practices in frequent de-warming. The frequent de-warming knowledge and practice have been related in the table-7. Both the attributes did not show any significant association in respect of frequent de-warming (p>0.05)

Table 8: Relationship between knowledge and practices in Taking IFA tablets under WIFS. The table-8 associates the knowledge and practice of taking IFA under WIFS. There was no significant association between the knowledge and practice taking IFA under WIFS. Table 9: Relationship between knowledge and practices in regarding regular check up:

The regular check up knowledge and practice was related in the table-9. Among the study subjects 31% had knowledge and practice and 42.9% did not have either knowledge or practice. The above relationship between the two attributes were statistically very highly significant (p<0.001).

Iron deficiency anemia is a major cause for declinement in physical, emotional and cognitive growth among adolescents. Various preventive strategies for iron deficiency Anemia are practised well across India. This study highlights the knowledge, attitude and practice of Adolescents in Chennai Corporation schools (11-15 years) regarding prevention of Anemia. In this study 104 participants (30.1%) had better knowledge about iron rich sources as compared with study done by Kakkar et al7 that showed 39.7% have knowledge about iron rich sources.

In the study of Dhikale et al6 Knowledge about Iron rich sources was found in 139(40.6%)participants. The study done by shojaeizadeh et al7 showed that the knowledge about iron rich sources was found in 42.7%. In this study, it was found that the gap between the knowledge and practice is found to be statistically significant (P-value <0.001) In this study 145(42%) participants have knowledge about WIFS programme compared to Dhikaleet al6 study reported that 88.7% have knowledge about WIFS Programme. In this study the attitude regarding eating green leafy vegetables was found to be 208(60.2%) which was higher when compared to the study of shojaeizadeh et al7 where favourable attitude was 45.9%. Regarding practice in this study 120(34.7%) participants taking Iron rich sources at frequent intervals which was lower as compared with the study done by Kakkar et al5(47%) and shojaeizadeh et al7 (55.5%). The percentage of taking weekly iron tablets under WIFS programme is 60.2%(208participants) which was lower where compared Dhikale et al6 which was 85.8%.

RECOMMENDATIONS
By improving knowledge attitude and practice in school going Adolescents, we can prevent Iron deficieny anemia. Education on nutrition regarding Iron rich sources should be conducted regularly for Adolescents Teachers and parents should advice on personal hygienic practices like wearing footwear, using sanitary latrines etc. Strengthening and Integration of WIFS programme in schools should be done to increase coverage.

LIMITATION
This study is a small random study conducted particularly in Urban and Semi Urban areas. Study shoud include Rural population also, since they are under privileged in getting medical and nutritional resources. Study does not address the factors affecting Knowledge, attitude,practice in Iron deficiency anemia. So future extension of this study will address these problems.

CONCLUSION
In our study there is no association between socio demographic profile and knowledge, attitude, practice of prevention of iron deficiency anaemia. It implies that anaemia prevention programmes should focus on children irrespective of their socio demographic profiles. Although attitude regarding intake of iron rich sources is good among adolescents, knowledge and practice are low. So we should give them adequate nutritional education and encourage them to consume iron rich food. In this study coverage of WIFS programme is 60%. We have to improve and strengthen the existing WIFS programme to cover all vulnerable adolescents.

REFERENCES

