

Association of Life Style and Prevalence of Anemia among Women in Rural Areas

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ABSTRACT

Iron deficiency anemia is one of the major health problems faced by women. Several factors such as age, sex, socio-economic status, educational level play prominent roles in influencing the health status. Iron deficiency anaemia may result in slow growth and development, fatigue, stillbirth etc. A total of 278 participants were included in the study. Among the study population, 84.9% were educated, 15.1% were illiterates and 68% of the study population was aware of iron deficiency anemia. This study showed that knowledge and awareness on iron deficiency anemia among women were significantly low and should be improved. Nutrition and dietary education plays a vital role in improving knowledge leading to long-term beneficial health effects. Creating and improving knowledge nutrition and health aspects will help to improve their awareness and families. The control and prevention of anemia is an essential part of the overall effort to fight against iron deficiency anemia. Awareness and nutrition education to prevent this deficiency.

Key Words: Iron deficiency anemia, sources of iron, Anemia awareness, iron rich diets, KAP on anemia.

I. INTRODUCTION

When the concentration of hemoglobin (Hb) in the blood is below normal the condition known as anemia occurs. Even though conjunctiva and palmar pallor have a low sensitivity and intermediate specificity for diagnosing anemia, they can nevertheless be helpful when laboratory testing is limited. Clinical symptoms of anemia include fatigue, palpitations, headaches, and shortness of breath. The most widely used indicator and evaluation technique to characterize anemia in clinical practice and public health is the measurement of Hb levels.^[1]

Anemia can also be defined as a condition when there is not enough red blood cells (RBCs) in the blood to meet physiological requirements. Anemia can be identified by a number of methods, including Hb electrophoresis, blood film analysis, mean corpuscular volume, blood reticulocyte count, and RBC count, while low Hb concentration and low hematocrit are the most common ways.^[2]

Pregnancy-related anemia is a global problem that affects both industrialized and developing nations. This disorder is associated with higher rates of morbidity and death, unfavorable birth outcomes, and delayed infant development. It also has major health ramifications. Preterm delivery, low birth weight, early rupture of the membranes, preeclampsia, and maternal and fetal mortality are among the negative consequences of anemia during pregnancy.^[3]

Reduced red blood cell formation as a result of low iron levels in the body is known as iron deficiency anemia. It is the most prevalent nutritional condition in the world, making up around half of instances of anemia. Inadequate iron intake, reduced iron absorption, elevated iron demand, and elevated iron loss can all lead to iron deficiency anemia. Effectively determining the underlying cause of the ailment and implementing the suitable treatment plan are crucial for its assessment and handling. A common pregnancy problem that affects about 22% of women in the second and third trimesters is iron shortage. The development of organ systems, especially the brain, depends on iron. Preterm birth, smoking, maternal diabetes, iron deficiency during pregnancy, and other risk factors are all linked to inadequate iron consumption in babies.^[4]

Thus this study was aimed to assess the prevalence and knowledge about iron deficiency anaemia among the rural population of Tamil Nadu.

II. MATERIALS AND METHODS

This Prospective observational study was conducted in the rural area of Tamil Nadu for a period of 3 months (September to November 2023). A total of 278 participants were included according to inclusion and exclusion criteria.

In order to record the necessary data, a detailed Data Collection Form (DCF) including the patient demography, life style and dietary intake of patient was designed for the study. The study details were explained to the patients and an informed content was obtained from all the study participants.^[5]

QUESTIONNAIRE

1. Age?
2. Level of education?
3. What is your occupation?
4. Are you Anemic?
5. Do you take medications for anemia?
6. Have you heard about iron deficiency anemia before?
7. Is iron deficiency anaemia is a major health problem faced by women?
8. What do you think is the reason for anemia?
9. What do you think are the symptoms of iron deficiency anemia?
10. What do you think are the effects of iron deficiency anemia?
11. Do you know green leafy vegetables and meat are rich in iron?
12. Do you know intake of citrus (orange, lemon) fruits can help in the absorption of iron?
13. Do you know consumption of tea or coffee after a meal will decrease the absorption of iron?
14. Do you know iron deficiency anemia has an effect on a child's growth, immunity and intelligence?
15. Do you know the iron requirement for pregnant women is higher than women who are not pregnant?
16. How do you prevent iron deficiency anemia?
17. How do you think iron deficiency anemia can be treated?
18. Do you think regular medical check-ups are important for women?
19. Which type of food do you prefer?
20. How many times do you include fish in your diet?
21. How many times do you include Meat in your diet?
22. How many times do you include Milk in your daily diet?

23. How many times do you include Dates in your diet?

III. RESULTS AND DISCUSSION

This survey was conducted among the women in rural areas of Tamil Nadu. 278 women participated in the study. Out of the 278 participants, 57.2% were in the age group of 21 -30 yrs. 19.4% women belong to 31-40 yrs of age, 13.3% were from above 40 yrs of age and 10.1% were in the age group of below 20yrs which was similar to a previous study. It shows 58% of the participants who belonged to the age group 21-30 years and remaining 22% of the participants belonged to the age group 31-40 years.^[6]

84.9% were educated while the remaining 15.1% were uneducated / illiterate. The results were in line with previous survey reporting 52% educated and 48% illiterates.^[7]

Out of 278 participants 68.3% were not anemic. 15.1% were anemic and 16.6% don't know about their condition. This was in concurrence with the previous studies that have reported nearly half of the adolescent girls were anemic, with 23% mild, 19.4% moderate, and 1.8% severe anemia which was the prevalence of anemia among the participants.^[9]

Majority (92.4%) of the respondents was not taking any medications for anemia and 8.6% were consuming medicine for treating anemia.

68% respondents were having basic knowledge about iron deficiency anemia while 25.5% participants do not know about this condition of anemia and 6.5% has no idea about the disease itself.^[8]

In our study 55.8% agree with the statement that anemia is considered to be a major health problem for women. 20.9% don't agree with this and 23.4% had no idea about this. The results showed that the participants of our study had appreciable knowledge about anemia when compared to the reports of another study stating that majority of the study population 45% disagreed while only 19% of the participants agreed that iron deficiency anaemia as a major health problem among women.^[10]

Most of the participants were aware of one or more of the causes of anemia. Among the 15.1% think that increased blood loss during menstruation is a major cause, 34.2% think that less intake of iron dietary is the main reason for anemia while 21.2% had no idea about the reason for anemia. This was in contrast to the previous study that only

9% of the participants were aware of the causes of iron deficiency anaemia.^[7]

In our study 23.4% women accepted that being fatigue is the symptom of anemia; 27.3% of participants think that it is indicated by the pale skin colour; 2% participants think that delayed child birth and 0.2% respondents think that alopecia are symptoms of anemia. Out of the 278 respondents, 24.8% participants think all the above conditions are symptoms of anemia. While a similar study reports that only 14% of the participants were aware of all the symptoms of iron deficiency anaemia.^[9]

Out of 278 participants 11.2% think that low birth weight babies is an effect of anemia. 19.4% think that decreased growth and development is an outcome; 3% think prematurity is the effect and 2% think that stillbirth is effect of anemia. While 28.8% think that all the above are effects of anemia and the remaining 35.6% participants had no idea about the effects of anemia. The participant's awareness about the effects of anemia was high when compared to another study that shows only 13% of the study population had knowledge on the effects of iron deficiency anaemia.

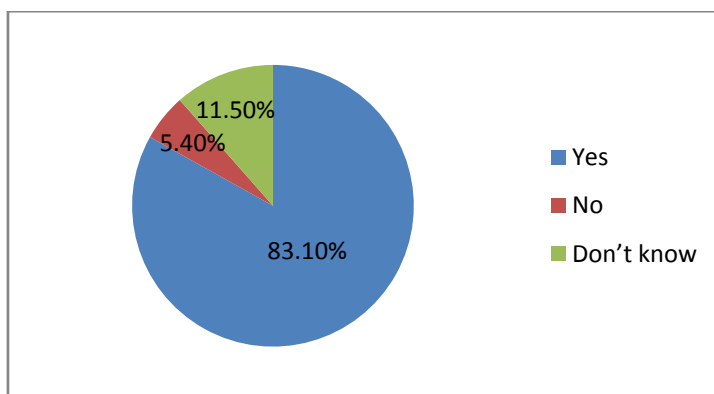


Fig 1: Knowledge on sources of Iron content

83.1% participants know that green leafy vegetables and meat are rich in iron. 11.5% had don't think as the same. 5.4% participants had no knowledge about iron rich foods.

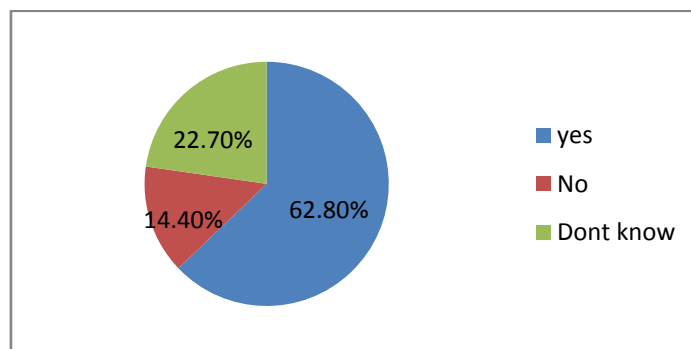


Fig 2: Knowledge on increase in Iron absorption

62.8% participants know intake of citrus fruits can help in the absorption of iron. 14.4% participants don't know about this and 22.7% had no idea about intake of citrus fruits.

45.7% participants know consumption of tea or coffee after a meal will decrease the absorption of iron. 22.3% don't know consumption of tea or coffee after a meal will decrease the

absorption of iron and 32% had no idea about this iron absorption.^[10]

51.4% participants out of 278 participants know iron deficiency anemia has an effect on a child's growth, immunity and intelligence. 18% participants have said no for this statement and 30.6% had no idea about know iron deficiency anemia has an effect on a child's growth, immunity and intelligence.

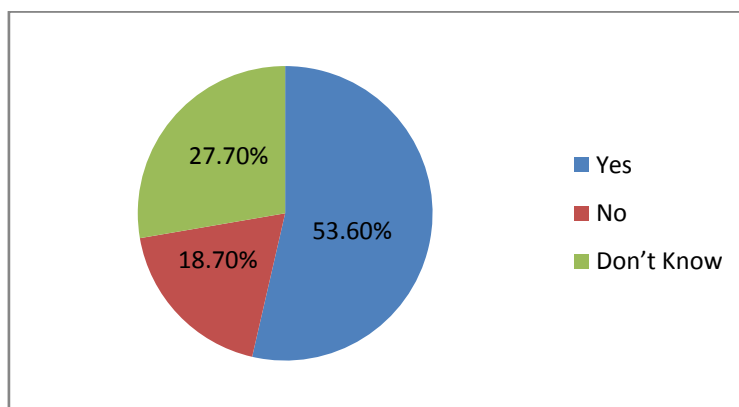


Fig 3: Knowledge about increased Iron requirement for pregnant women

53.6% of participants know the iron requirement for pregnant women is higher than women who are not pregnant. 65.5% of participants think regular medical check-ups are important for women.

55.8% participants think that anemia can be prevented by increased intake of iron. 16.5% participants think that consumption of vitamin C rich fruits. 8.3% think that anemia is prevented by avoiding post meal coffee/tea. 19.4% of participants has no idea about prevention of anemia.^[11]

42.8% of participants think that anemia can be treated with iron supplements. 7.9% think that by consuming vitamin-C tablets. 1.5% thinks that deworming can be done as a treatment. 25.5% think that all the treatments are used in treating anemia. 22.3% of participants has no idea about the anemia treatment.

65.5% of participants think regular medical check-ups are important for women. 18.7% participants don't agree with this and 15.8% has no idea about this.

62.6% were non vegetarians and 37.4% were vegetarians. 33.5% eat fish weekly. 45.3% eat fish monthly. 2.1% includes fish daily in their diet and 19.1% are vegetarians they don't include fish in their diet. 60.4% of participants eat weekly. 21.2% eat monthly. 6% eat daily. 0.4% eat every two weeks. 0.2% eat weekly twice or thrice and 11.5% don't eat meat. 32.4% participants include Milk in your daily diet. 34.5% includes twice in a day. 8.3% participants includes thrice a day. 17.3% never includes milk. 30.6% participants eat dates daily. 30.6% eat weekly; 23.4% includes dates monthly and the remaining 15.5% never eat dates.^[11]

In general, the results of this study showed that knowledge and awareness on iron deficiency

anemia among women were significantly low and should be improved. The results of the present study showed that knowledge and awareness among women towards iron deficiency anemia varied according their level of education. Awareness regarding iron deficiency anaemia is directly linked with the educational and social status of a community. Education plays a role in the awareness of iron deficiency anemia. Therefore it is important to have adequate knowledge and awareness regarding iron deficiency anemia.^[7]

IV. CONCLUSION

Anemia continues to be fairly prevalent among women in rural areas of Tamil Nadu. The major associations with socioeconomic class and dietary practices indicate that public health approaches to mitigation of iron deficiency should target these factors when attempting to ameliorate anemia in this population. Nutrition and dietary education plays a vital role in improving knowledge leading to long-term beneficial health effects. Creating and improving knowledge nutrition and health aspects will help to improve their awareness and families. The control and prevention of anemia is an essential part of the overall effort to fight against iron deficiency anemia. Awareness and nutrition education to prevent this deficiency.

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