

Assessment of knowledge, attitude and practices regarding anaemia in pregnant women and its impact on hemoglobin levels



Gynaecology

KEYWORDS: Knowledge, anaemia, hemoglobin, pregnant women, practice, pregnancy.

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ABSTRACT

The purpose of this study was to assess the knowledge, attitude and practices of pregnant women regarding anaemia, Iron rich food and iron supplements and also to assess the impact of these factors and other socio demographic variables on the hemoglobin levels. Anaemia among pregnant women of reproductive age (21-44 years) was assessed in this study.

METHODOLOGY

This was a single cross-sectional, descriptive survey. The anaemia status of the pregnant women was determined by measuring their haemoglobin levels. Possible determinant factors including socio-economic status, knowledge, attitudes, practices and food intake were assessed using a structured questionnaire.

INTRODUCTION

Pregnancy is a life changing experience in the life of every woman. There are challenges and one need to overcome them on a regular basis. Amongst them are certain common health issues, where low hemoglobin levels is one of them. Hemoglobin is a very vital component in the blood that aid in the transportation of oxygen to the red blood cells and simultaneously to the various parts of the body. The condition where the hemoglobin levels fall is known as anemia, and many women are found to suffer from this during the entire pregnancy and even from pre-conceptional period. Anemia is a very common health hazard and as per the NFHS-3 survey the incidence of anemia in Indian women in the age group of 15-49 years is 55.3%.[1]. The prevalence of anemia in pregnant women who are the most vulnerable group of the society was 58.7%[1]. Another data showed that 87% of pregnant women in India were anemic and anemia contributed to 22,000 maternal deaths[2]. Negative attitudes towards antenatal visits, importance of a healthy diet, iron and folic acid intake during pregnancy could have a profound influence on their hemoglobin levels. The negative impact and poor compliance of pregnant women is due to their inadequate knowledge regarding anemia, iron rich food and avoidance of iron supplements due to misconceptions. Variables other than their knowledge, attitude and practices could also influence the hemoglobin states of pregnant women namely socio demographic factors like education, income, parity, exposure to counseling regarding anemia. The purpose of this study was to assess the knowledge, attitude and practices of pregnant women regarding anemia, Iron rich food and iron supplements and also to assess the impact of these factors and other socio demographic variables on the hemoglobin levels of these vulnerable groups of women.

MATERIAL AND METHODS

This is a cross-sectional study conducted at the Department of Obstetrics and Gynecology at Govt.KGH, Triplicane, Chennai-5. Patients were randomly selected and were asked to fill a questionnaire in their own local language. The questionnaire had details of socio demographic data and questions to assess knowledge, attitude and practices of these antenatal women regarding anemia, iron rich food and iron supplementation. Knowledge part of the questionnaire had questions regarding their awareness of the term anemia, cause of anemia, complications due to anemia and regarding iron supplementation with a score of 1 for the correct response and a zero score for a incorrect or no response. 1 ml of blood was collected, and Hb level was assessed by calorimeter in a central lab. The Hb level of 11 g% is taken as cut off. Patient with Hb <11 g% were considered as anemia.

RESULTS:

The analysis were based on 300 (Three hundred) returned questionnaires from the participants. The analyses were divided into two major sections: 1. personal data of participants. 2. knowledge of anemia.

i)Personal Data of the Participants

This section deals with the socio-demographic characteristics of the participants in this study.

Age Distribution

The ages of the participants ranging from 21-44years were categorized into four intervals. This was presented in table -1 below

Table -1: Distribution of participants by Age

Age	No. of. Participants	Percentage
21-25	98	32.6
26-30	132	44
31-35	51	17
36-44	19	6.4
Total	300	100

Table -1 showed that the highest proportion of participants were aged between 26 and 30 years (44%), followed by those aged 21-25 (32.6%) and then those aged 31-35years (17%) and aged 36-44(6.4%).

Level of Education

The concern here was to show how the level of education influences the knowledge and attitude regarding anaemia among pregnant women. This is presented in table -2 below.

Table -2: Distribution of participants by Educational Qualification

Educational qualification	No. of. participants	Percentage
Secondary school	114	38
Higher secondary school	96	32
Graduate	54	18
Post graduates	36	12
Total	300	100

The table -3 shows that majority of the participants were completed secondary school study (38%)%.

Table -3: Distribution of participants based on monthly income

Monthly income	No. of. participants	Percentage
Rs2000 – Rs4000	162	54
Rs 4001 –Rs 6000	102	34
Rs 6001-Rs8000	25	8.3
Rs8001-Rs10000	11	3.7
Total	300	100

The table -3 shows that 54% of the participants had a monthly income of Rs 2000-Rs4000 while 34% earned between Rs4001-Rs6000 rupees per month. Only 3.7% were earning Rs8001-Rs10000 rupees monthly.

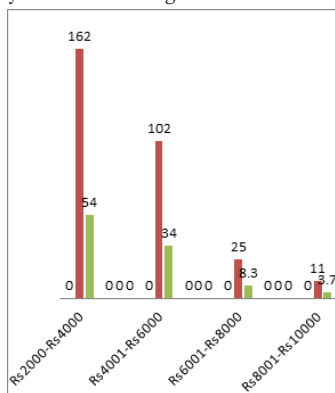


Figure-1: Distribution of participants based on monthly income

ii) Knowledge of Anaemia

Anaemia, is defined as a decrease in oxygen carrying capacity of blood to the the tissues due to decreased hemoglobin in the blood . Low hemoglobin during pregnancy is a serious issue for both the pregnant women and the developing fetus in our society today. We seek to know whether the pregnant women have knowledge of anemia or not.

Table -4: Distribution of participants by Knowledge of anaemia

Knowledge of anaemia	No of participants	Percentage
Yes	212	70.6
No	88	29.4
Total	300	100

Table -4 shows that a higher proportion of participants (70.6%) have heard anemia while 29.4% of the participants have not heard of anemia. The results shows that majority of the pregnant women have knowledge of anemia during the period of administration of the questionnaires.

Table 5: Knowledge of the participants regarding anaemia, iron rich food and iron supplements.

Response	Correct Response	Wrong Response	Not aware
Knowledge regarding what is anemia	116(38.6%)	72(24%)	112(37.3%)
Anemia is more prevalent in pregnant women	124(41.3%)	70(23.3%)	106(35.3%)
Pregnant women can develop complications due to anemia	220(73.3%)	20(6.6%)	60(20%)
Severe anemia can affect growth of the fetus	225(75%)	13(4.3%)	62(20.6%)
Pregnant women should take iron supplementation in spite of taking healthy diet	145(48.3%)	83(27.6%)	72(24%)
Excessive consumption of Tea/coffee can lead to IDA	112(37.3%)	94(31.3%)	94(31.3%)
Consuming Iron along with food reduces the efficacy of iron	153(51%)	85(28.3%)	62(20.6%)

Iron tablets are dispensed free of cost in Government hospitals	268(89.3%)	9(3%)	23(7.6%)
Awareness of Hb level during pregnancy	162(54%)	102(34%)	36(12%)

Table 6: Reasons perceived by antenatal women for cause of anaemia.

Resons	No.of. Participants	Percentage
Not consuming Iron rich diet	182	60.6
Not taking Iron supplementation during pregnancy	54	18
No interval between subsequent pregnancies	37	12.3
Increased blood loss during periods	29	9.6

Table 7: Knowledge regarding food rich in iron

Food Rich in Iron	No.of. participants	Percentage
Dates/dry fruits	215	71.6
Chicken/Mutton	102	34
Green leafy vegetables	257	85.6
Eggs	140	46.6
Milk	129	43
Cereals	68	22.6

*Multiple responses

Table 8: Source of Information regarding Anaemia.

Sources	No.of participants	Percentage
T.V	36	12
HOSPITALS	52	17.3
RADIO	10	3.3
NURSES/HEALTHWORKERS	67	22.3
DOCTORS	135	45

iii) Practices of Participants

Distribution of study population based on food habit after becoming pregnant

Practices	No.of.participants	Percentage
How is your food habit after becoming pregnant?		
Taking the usual diet	130	43.3
Taking the special diet	170	56.7

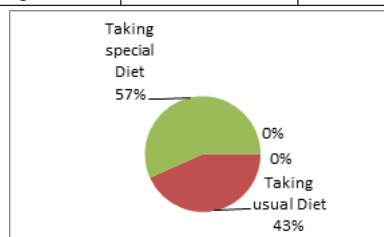


Figure-2 Distribution of food habit

Distribution of study population based on iron intake

Practices	No.of.participants	Percentage
Are you taking iron tablets during this pregnancy		
Regular	235	78.3
IRREGULAR	50	16.6
NOT TAKING	15	5

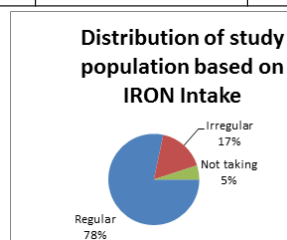


Figure-3

CONCLUSION

This review showed many gaps in our knowledge about the adverse effects of maternal anemia and iron deficiency on pregnancy outcome. Such disparities include inadequate documentation of anemia's effects on maternal mortality, morbidity, and well-being, and on infant health and development. Maternal iron deficiency anemia increases the risk of preterm delivery and subsequent low birth weight, and accumulating information suggests an association between maternal iron status in pregnancy and the iron status of infants postpartum. Certainly, iron supplements improve the iron status of the mother during pregnancy and during the postpartum period, even in women who enter pregnancy with reasonable iron stores. Creating awareness about iron supplementation and health education can grossly reduce the incidence of anemia in antenatal population and thereby prevents anemia related mortality and morbidity. Routine iron and folic acid supplementation significantly improve the hemoglobin status among the pregnant women.

Recommendations:

1. To increase the hemoglobin during pregnancy, awareness should be created among the women to take in iron supplements in the desired amount even before conception.
2. Awareness should be created among the women to take in whole wheat breads, leafy green and eggs, dried fruits, cereals and lean meat.
3. A good amount of vitamin C in fruits are Lime, oranges, other citrus fruits, potatoes and raw veggies. These fruits can be taken to increase the iron contents in pregnant women.
4. It is advised to continue taking in foods rich in folic acid like asparagus, broccoli, beans, beef and muesli. It will also help to prevent the baby to be born with spinal cord defects called spina bifida.

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