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MAGNITUDE OF ANEMIA AND KNOWLEDGE ABOUT IRON AND FOLIC ACID SUPPLEMENTS (IFAS) AMONG ANTENATAL WOMEN, GOVT.GENENRAL HOSPITAL, KURNOOL, ANDHRA PRADESH: A CROSS-SECTIONAL, DESCRIPTIVE STUDY

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A B S T R A C T

Background: Iron and folic acid supplements are a key intervention and mandatory for all antenatal women, irrespective of their haemoglobin status, because as gestational weeks increase, nutrition alone is insufficient to meet the demands. On the other hand, the prevalence of anaemia remains persistently high, with 52% of antenatal women being anaemic, according to NFHS-5. IFAS has shown significant benefits in reducing maternal and foetal complications. **Objectives**: The aim of this study was to estimate the magnitude of anaemia and assess knowledge about Iron and Folic Acid Supplements (IFAS) among antenatal women. **Methods:** An observational, descriptive cross-sectional study was conducted among 142 antenatal women selected by convenience sampling at Government General Hospital (GGH), Kurnool. Sahli's method was used for haemoglobin estimation, and a structured questionnaire was used to assess knowledge after obtaining informed consent. **Results**: Out of 142 antenatal women, 45% belonged to the 18–21-year age group, 50.7% were primi's, and 49% were multigravidas. The magnitude of anaemia among antenatal women was normal, mild, moderate 27.4%, 61.9% and 10.56% respectively. The proportion of antenatal women having good, fair, and poor knowledge about IFAS was 0.7%, 52.8%, and 46.4%, respectively. **Conclusion**: The study revealed that the majority of antenatal women 61.9%were anaemic, with only 27.4% having normal haemoglobin levels. Furthermore, 46.4% of the women had poor knowledge about IFAS..Hence should focus more on Information, Education and Communication activities(IEC).

Keywords: knowledge, magnitude, anaemia iron and folic acid supplements, antenatal women.

INTRODUCTION

Anaemia is a significant public health concernaffecting millions of pregnant women worldwide, particularly in India. According to the World Health Organization (WHO), anaemia affects 38% of pregnant women globally, with the highest prevalence rates in South Asia 52%.[1] A cross sectional studyshownthat 81.8% of pregnant women were anemic,out of that 0.2%, 91% and 8.8% were identified as severely, moderately, and mildly anemic,withthemean Hb concentration 9.06 g/dl[2]. The magnitude of anemia in rural areas were 62%[3] ·Iron Deficiency Anemia(IDA) is common during pregnancy due to higher iron requirements. In India, the prevalence of IDA ranges from 38% to 72%, a study showed that more than four-fifths, 81% of pregnant women took Iron and Folic acid supplements (IFAS) during the current pregnancy and but the compliance was 37.7%[4] . The Ministry of Health and Family Welfare, Government of India, mandates Iron and Folic Acid Supplementation (IFAS) for all pregnant women. As per the guidelines, IFAS is to be taken daily, consisting of 60 mg of iron and 500 µcg of folic acid for 180 days, starting from the 4th month of pregnancy[5]. A

cross-sectional study revealedthat45% women had inadequate knowledge about IFAS.A study shown the knowledge about the antenatal care that, 22% mothers had poor, while 45.6% and 32.4% had average and good knowledge respectively. Age and educationof the mother had shown significant relation with the knowledge[6]. As IFAS plays a crucial role in preventing and controlling anaemia but knowledge and adherence to IFAS among pregnant women in India are suboptimal. Therefore, a study was undertaken to assess the magnitude of anaemia and knowledge about Iron and Folic acid supplements among Antenatal women at GGH, Kurnool, Andhra Pradesh.

Problem statement:

"To assess the magnitude of anaemia and knowledge about Iron and Folic acid Supplements among antenatal women at Government General Hospital, Kurnool, Andhra Pradesh."

Objectives:

- To estimate the magnitude of anaemia among antenatal women
- To assess the knowledge about IFAS among antenatal women

METHODOLOGY

Study design: An observational, descriptive,cross-sectional study. **Study Period**: The study period is 2 months i.e., from August 2024 to September 2024. Study setting: GGH, Kurnool, Andhra Pradesh.

Study Population: All Antenatal women attending GGH,Kurnool.

Inclusion criteria: Those Antenatal women who were available at a GGH during the months of August and September and who were willing to participate in the study. whereas antenatal women with comorbid factors like Hypertension, DM, Epilepsy,Heart and Respiratory disorders were excluded.

Sampling size: A sample of 142 subjects were included in the study, based on National Family health survey 52.2% of antenatal women found to be anemic. Using the formula,4pq/L2, where p is the prevalence and Q is 100-p and absolute error of 8.5%, the required sample size was139. By using convenience sampling technique,142 sample who attended GGH were included[7.]

Sampling technique:

Study tool: A predesigned, structured questionnaire was used. Study variables included, Sociodemographic details such as age, age at marriage, education occupation, economic status, type of family, gravida, history of abortion, history of Iron sucrose/blood transfusion and previous knowledge about IFAS.

Knowledge about IFAS comprised 34 multiple-choice questions based on Anemia Mukt Bharath guidelines[8].The scores weregradedasgood,fair and poor based on correct responses, > 75 %,51- 75%and Poor≤ 50% respectively.

Hemoglobin estimation was done by Sahli's methodand antenatal women were categorizedbased on WHO cutoff[9] as normal, mild anemia, moderate anemia and severe anemia, ≥ 11gm/dl,10-10.9gm/dl,7-9.9gm/dland <7gms/dl respectively.

Informed consent wasobtained before data collection. Data was entered in MS Excel 2020 and was analyzed using IBM SPSS 20 trial version. Statistical tests were applied whenever necessary.

RESULTS

Table 1: Distribution of study subjects based on socio- demographic variables (n = 142)

Variables	Categories	Frequency(n)	%
Age in years	18-21	64	45%
	22-25	50	35%
	26 and above	28	19%
Age at marriage	<18	20	14%
	18-21	101	71%
	22-25	17	11.9%
	26 and above	4	2.8%
Educational status	Illiterates	20	14%
	Primary school	14	9.8%
	Secondary school	39	27%
	Higher secondary	50	35%
	Degree and above	19	13%
Occupational status	Home makers	129	90.8%
	Working	13	9.1%
*Socio economic status	Upper	115	80.9%

	Upper Middle	27	19%
Type of family	Nuclear family	50	35.2%
	Joint family	92	64.7%
Type of diet	Vegetarian	18	12.6%
	Mixed	124	87.3%

*B.G. prasad socioeconomic scale-2023[10]

Table 1 states that out of 142 study subjects, 45% belonged to 18-21, 35% to the 22-25 and only 19% to the 26 and above age group. The majority of study subjects i.e.,71% their age at marriage was 18- 21. Only 14% were illiterates and 35% had higher secondary education. Regarding occupational status, the majority of study subjects 90.8% were homemakers. Most subjects 80.9% belonged to class -1 ,whereas only 19% belonged to class – II. More than half of study subjects, 64.7% were from joint family and most of them, 87.3% followed a mixed diet.

Table 2: Distribution of study subjects based onobstetrical variables (n = 142)

Variables	Categories	Frequency(n)	%
Gravida	Primi	72	50.7%
	Multi	70	49.2%
*Birth spacing	≤ 2 years	43	61.4%
	3-4 years	27	38.5%
*Previous child birthweight	<2500gms	12	17.1%
	≥ 2500gms	58	82.8%
H/o Abortions	Yes	24	16.9%
	No	118	83%
*H/o Still Births	Yes	7	10%
	No	63	90%
*H/o Iron sucrose infusions	Yes	10	14.2%
	No	60	85.7%
*H/o Blood transfusion	Yes	9	12.8%
	No	61	87.1%
Prior knowledge	Yes	87	61.2%
	No	55	38.7%

*Excluding primi gravida

Table 2 shows that out of 142 study subjects, half of study subjects i.e., 50.7%, were primi and 49.2% were multigravida. Among 70 study subjects,61.4% had a birth spacing of ≤ 2 years followed by 38.5% with 3-4 years of birth spacing. The Majority of them, 82.8%, had a previous child's birth weight ≥ 2500gms and only 17.1% had <2500gms. Most of the study subjects had no history of abortions or still birth or any transfusion. More than half,61.2 % of study subjects had prior knowledge and 38.7% had no prior knowledge about iron and folic acid supplements

Table 3: Level of Haemoglobin status among Study subjects(n=142)

Categories according to WHO	n (%)
Normal (≥11gms/dl)	39(27.46%)
Mild anaemia (10-10.9gms/dl)	88(61.97%)
Moderate anaemia (7-9.9gms/dl)	15(10.56%)
Severe anaemia (<7gms/dl)	0(0%)

The above table describes Hb% level. Out of 142 study subjects, only 27.46% had normal haemoglobin levels, whereas mild, and moderate anemia were 61.7% and 10.56% respectively, no antenatal women with severe anemia.

Table 4: Level of knowledge of Study subjects about IFAS(n=142)

Level of knowledge	n (%)
Good (>75%)	1(0.7%)
Fair (51-75%)	75(52.8%)
Poor (≤50%)	66(46.47%)

The above table shows that out of 142 study subjects, only 1(0.7%) had goodknowledge, 75(52.8%) had fair and 66(46.7%) had poor knowledge about IFAS.

DISCUSSION

The present study aimed to estimate the magnitude of anaemia and knowledge levels of antenatal women about IFAS. Only one fourth of antenatal women had normal haemoglobin level, while more than half of them,61.97% had mild anaemia.A significant proportion, 46.47% had poor, 52.8% had fair level of knowledge about Iron and folic acid supplements, only 0.7% possessed good knowledge.

Aprevious study showed that with maximum Hb level was 13.0 g/dl, and the minimum level was 7.8 g/dL, with a mean Hb level of 10.6 g/dl and a standard deviation of 0.9 g/dl,and the findings of this study, shown that half of the pregnant women, 57.2% had Hb levels <11 g/dL and were thus classified as anemic[10]. These findings were almost similar to present study.

Having good knowledge will promote better compliance with iron and folic acids and better self- seeking behaviour. The study observation of no severe anemia among the participants, as compared to previous study is a step in the right direction and indicates the intensification of activities of Anemia Mukt Bharat. The strength of the present study was that both magnitude and knowledge were assessedituseful for future health education programs.However small sample size wasthe main limitation of the study.

CONCLUSION

The study revealed that the more thanhalf of antenatal women were anaemic, with only one fourth of them with normal haemoglobin levels. Furthermore, nearly half them had poor knowledge about IFAS. Hence should focus more on Information, Education and Communication (IEC)activities.

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