



This is to certify that Ms. Sukriti Mishra student of MBBS-II of Santosh Medical College, Ghaziabad has been awarded the Short Term Studentship (STS) for a period of two months during 2019 under the guidance of Dr. Rashmi Saxena for the project entitled, "Determinants of compliance with iron-folate supplementation among pregnant women attending tertiary hospital" (Ref. No. 2019-03345) and the Report was found to be satisfactory.

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# Selection of ICMR- Short Term Studentship (STS) 2019 application- reg.

8 messages

ICMR-STS <sts@bmi.icmr.org.in> Reply-To: stshrd2017@gmail.com To: kritisanju1999@gmail.com Wed, May 1, 2019 at 4 08

No: 21/1/2019-HRD-STS

MUST forward this E-mail to your guide.

Dear Students.

This is in reference to your application for ICMR- Short Term Studentship-2019 submitted ONLINE to the ICMR.

I am pleased to inform you that the DG, ICMR approves selection of your application for STS to carry out the proposed research work in any two months (between April to July, 2019) to work on the proposed STS research project. The award of Stipend Rs. 20,000/- and a Certificate is subjected to conditions and approval of your STS Report (to be submitted in October 2019) by ICMR. Kindly complete the research at the earliest, so that the Report can be prepared and submitted in time. (Report Submission guidelines are available at: http://14.139.60.56:84/Instuctions.aspx)

Please note that NO Report shall be considered/accepted after the last date i.e. 31st October 2019 (till 3:00 PM) only.

The research carried out by the student must be in compliance with ICMR's ICMR Ethical Guidelines for Biomedical Research on Human Participants, 2017 and National Ethical Guidelines for Biomedical Research Involving Children, which may be downloaded from ICMR website (http://www.icmr.nic.in/guidelines/ICMR\_Ethical\_Guidelines\_2017.pdf) and http://www.icmr.nic.in/guidelines/National\_Ethical\_Guidelines\_for\_BioMedical\_Research\_Involving\_Children.pdf

On completion of the studentship, a Report of the actual work done may please be submitted ONLINE as per detailed format and instructions specified on ICMR website.

IMPORTANT: It is advised that prior to writing/submitting the report, please go through the detailed Report Submission Guidelines/instructions given on ICMR-STS website.

In case of any queries, please send email to stshrd2017@gmail.com

Best wishes,

Mrs. Harjeet Bajaj)

---dministrative Officer-STS
(For Director General)

Important : Please inform the Dean/Principal of your Medical/Dental College regarding your selection for ICMR-

This is an automated email. Please do not send reply to this email address.

Sukriti Mishra <kritisanju1999@gmail.com>
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Sukriti Mishra <kritisanju1999@gmail.com> To: rashmisaxena206@gmail.com Wed, May 1, 2019 at 5:30 AM

Wed, May 1, 2019 at 5 36 AM

#### **REFERENCE ID: 2019-03345**

# DETERMINANTS OF COMPLIANCE WITH IRON –FOLATE SUPPLEMENTATION AMONG PREGNANT WOMEN ATTENDING A TERTAIRY HOSPITAL IN UTTAR PRADESH

#### INTRODUCTION:

Anaemia in pregnancy is a major public health problem leading to high maternal morbidity and mortality, low birth-weight and high infant mortality. It is characterised by low haemoglobin concentrations and could lead to adverse effects. Anaemia is defined as a public health condition in which the number of red blood cells is insufficient to meet the body's physiologic needs with iron deficiency (ID) being the predominant nutrient deficiency causing anaemia. (1) World wide data suggests that normal dietary intake of iron is insufficient to meet the requirement of pregnant women. Globally, iron deficiency anaemia is associated with 22% of all maternal deaths (1,15,000) and 5,91,000 perinatal deaths per year (2). Prevalence of anaemia globally is 41.8% among pregnant women, with highest in Africa. In India, prevalence of anaemia is 54% which contributes directly to 20% maternal deaths. (1). It increases the incidence of anaemia affects 1.62 billion people (25%), among which 56 million are pregnant women. (3)

In India, particularly among pregnant women, it is a major issue. National Family Health Survey (NFHS-4) has reported a prevalence of anaemia to be 50.3%, with much variation between rural (54.3%) and urban (50.9%) populations.(4) The national iron plus initiative for pregnant women(2013) recommends IFA supplementation (100 mg elements iron and 500 mcg of folic acid) every day for at least 100 days, starting after first trimester, and for 100 days in post-partum period.NFHS-4 reported that no .of pregnant women who consumed iron folic acid for 100 days or more during pregnancy was only 30.3%. (5) The major problem with iron-folate supplementation in pregnant women seems to be non-compliance. The women often fail to take the supplements regularly as provided by their health workers due to varying factors like poor knowledge of iron rich foods, forgetfulness ,misconceptions related to iron, foul smell of tablet, ignorance of ill effects of anaemia, various myths & misconceptions related to iron intake etc (6) An equally plausible set of reasons for the continuing prevalence of anaemia relates to the poor coverage of IFA supplementation. This is expected to reach the pregnant women either through the antenatal service (ANC) or through frontline health workers. Although, the NFHS survey reports an improvement in the uptake of IFA from



15.2-30.2% at a national level from round 3 to 4,it is far from being sufficient(4). West African countries have also implemented iron supplementation programme for pregnant women. (7,8) Although, clinical trials have repeatedly shown efficacy of supplementation but all community based programmes have not been shown to be effective. Studies conducted in South East Asia, Latin America and in only a few African countries have shown that one of the main reasons why these programmes have been less effective than anticipated is low compliance of women with taking daily iron supplements.

National Rural Health Mission (NRHM) was launched in April 2005, to improve the rural health care delivery system and health status of the people. Antenatal care services are the first steps towards ensuring the health of mothers and the newborn. This was the key component for achieving Millennium Development Goals by 2015. This was an initiative by united nation for women and children health goals but India's performance continues to be poor in providing antenatal care services to its huge population, particularly in the rural areas. (9)

Improving compliance is essential for prevention and control of anaemia and to make the iron supplementation programme successful. Compliance is influenced by many socio-demographic factors and knowledge about iron supplementation.(10) Therefore it is important to know the factors so that proper interventions can lead to higher compliance in pregnant women and to reduce risk of adverse health outcomes. Hence, this study was conducted with a motive to evaluate compliance with iron-folate supplementation during pregnancy and to study the factors affecting the compliance with IFA supplement.

#### **AIMS & OBJECTIVES:-**

The general objective of this study is to assess the level of compliance and determine the factors associated with non-compliance to IFA supplements among pregnant women attending the antenatal clinic of a tertiary hospital in Uttar Pradesh, India.

#### The specific objectives are:

 To determine status of compliance of pregnant women with iron-folate (IFA) supplement.

- 2. To identify factors affecting compliance with iron-folate.
- 3. Assess knowledge on Anaemia, causes and consequences in the study population.
- 4. To assess the impact of these factors and other socio-demographic variables on the haemoglobin levels of these groups of women.

# REVIEW OF LITERATURE

India has the highest prevalence of anaemia in pregnancy. Earlier studies had shown that anaemia in pregnancy was mainly due to low dietary intake of iron and folate leading to iron and folic acid deficiencies. The National Nutritional Anaemia Prophylaxis Programme (NNAPP) aimed at iron and folic acid supplementation during pregnancy was initiated in 1973 in India (11). The National Anaemia Control Programme (NACP) has been in operation since 1991 and added the test, detect and treat strategy for the management of anaemia in all settings (12). Tenth Five Year Plan reiterated the importance of universal screening of pregnant women for anaemia and providing appropriate management depending on the severity of anaemia and time available for treatment. The guidelines in the National Iron Plus Initiative (NIPI) (13) elaborate how the programme is to be implemented

The National Family Health Survey (NFHS) 2 in 1998-99 was the first national survey to provide national and State-specific estimates of the prevalence of anaemia and severity of anaemia in pregnancy. Subsequently, NFHS 3 (2005-2006) published national and State-specific estimates of prevalence of anaemia in pregnancy. NFHS 4(14) (2015-2016) Fact Sheets provide the data on the prevalence of anaemia in the country and all States and Union Territories (UTs). Various studies have been done so far for evaluation of different factors which lead to non compliance.

Study conducted by Godara et. al shows that compliance is related to education of the pregnant women and proper explanation of instructions by doctor, pharmacist and nurses.(15)

Dutta A.J et al conducted study on 239 pregnant women to find out compliance to IFA and concluded that number of antenatal visits and knowledge of dose and duration of iron supplementation pills were affecting compliance to iron pills, increasing number of antenatal visits and imparting knowledge about dose and duration of iron supplementation pills will improve compliance to iron pills.(16)

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A study was carried out on 350 pregnant women routinely attending the antenatal clinic in a rural training health centre over a period of 3 months from July 2015 to September 2015 by **Sonkar et al**(17) It was found that only 140 (40%) of the participants were aware of significance of consumption of IFA tablets. Out of 350 only 221 (63.14%) pregnant women consumed the FSFA tablets. Out of 221 only 123 (55.65%) were consuming it correctly. Reasons for not consuming IFA tablets were forgetfulness in 48 (37.20%), side effects in 35 (27.13%), frustration with daily dose 23 (17.82%), ignorance 21 (16.27%), foul smell to tablets 20 (15.50%), misbelieves 7 (5.42%) and no response was given in 26 (20.15%).

Mithra P et al found 64.7% compliance with IFA in a study conducted on 190 pregnant women at Mangalore city of south India(18)

Nivedita K.et al conducted study on 316 patients & found that only 39.87% of the participants were aware of and understood the term anemia. 53.8% of the participants accepted that pregnant women were more vulnerable to anemia and 66.1% responded correctly that the fetus will be affected by severe anemia. (19) Soraya Siabani et al assessed the compliance with iron and folate supplementation, and the possibly causally associated factors, among pregnant women in western Iran. (20) In this cross-sectional study of 433 pregnant women compliance was 71.6%. The commonest causes of poor compliance were forgetfulness and side-effects. The compliance with iron was associated only with the level of education.

#### **MATERIAL& METHODS:**

#### **Study Design:**

This is a cross -sectional study.

#### **Study Setting:**

This study was conducted in a tertiary care hospital in Uttar Pradesh, over a period of two months from July 2019-August 2019.

#### Sample Size:

300 antenatal women in their 2<sup>nd</sup> and 3rd trimester attending antenatal clinic in a tertiary care hospital, Uttar Pradesh were included in the study.

#### **Inclusion Criteria:**

All women in their second or third trimester of pregnancy with Iron and Folic acid supplement prescribed to them and willing for follow-up in ANC clinic were enrolled in this study.

#### **Exclusion Criteria:**

Pregnant women with the following conditions were excluded from study.

- i. Haemolytic anaemia
- ii. Haemoglobinopathies
- iii. Eating disorders

#### **Ethical Considerations:**

Ethical clearance and approval for the study was obtained from the Institutional Ethical committee of the hospital .Written consent was obtained from all the respondents after explaining the purpose of the study. Routine haemoglobin estimation was done in all pregnant women attending the antenatal clinic.

#### **Study Procedures:**

Data was obtained using semi-structured interviewer guided questionnaire.

# **Study Variables:**

The outcome for this study i.e compliance to IFA supplement was assessed on the basis of the reported number of IFA tablets taken in the previous 7 days before taking the survey. Patient taking at least 70% of the expected dose which is equivalent to 5 tablets per week was considered as compliant women . While those who were taking less than 5 tablets or not taking at all, were considered non-compliant.

The independent variables like women's socio-demographic Characteristics (age, religion, socioeconomic condition & educational status) pregnancy related experience (Gravidity, family size and frequency of ANC visits), knowledge of anaemia & importance of consumption of IFA & iron rich foods were included. Reasons for not taking IFA was enquired. The respondents' comprehensive knowledge of anaemia was computed by summing up the answers given by multiple-choice questions.

#### Anthropometric Assessment.

Each patient's height & weight was noted. Haemoglobin measurement was done for each study participant . Blood sample were collected for haemoglobin level measurement at the laboratory of the hospital using an automated analyser . Anaemia was defined according to the WHO criteria i.e. mild: 9-11g/dL moderate: 7-9g/dl and severe: <7g/dL.

#### **Dietary Intake Evaluation:**

The retrospective dietary intake of the study participants was enquired if they had changed their dietary pattern than the usual routine after conception. During the survey all pregnant women were counselled about the benefits of IFA supplementations and their misconceptions were also addressed.

## **Statistical Analysis:**

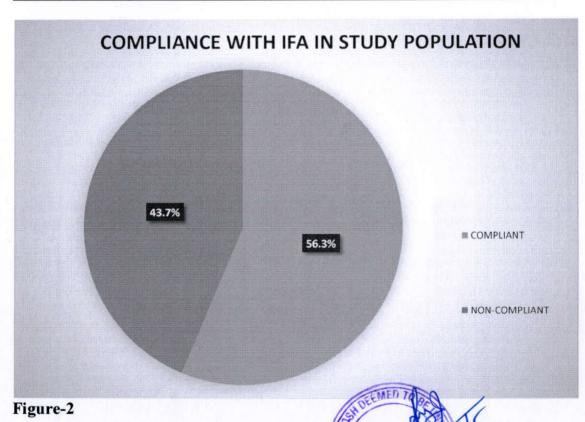
Data collected were feed using MS Excel & Statistical evaluation was done using Pearson-Chi square test & p value was calculated . P<0.05 was taken as statistically significant for compliance of IFA tablets & factors associated.

#### **RESULTS:**

Total 300 antenatal women in their 2<sup>nd</sup> and 3rd trimester attending antenatal clinic in tertiary hospital of Uttar Pradesh were enrolled. As shown in table 1, in the study group, overall compliance with IFA was seen in 169 women (56.3%) while 131 (43.7%) women were not compliant. (Figure-1)

Table-1: COMPLIANCE WITH IFA IN STUDY POPULATION

CATEGORY	TOTAL NO	%
Women who consumed more than 5 tablets in last week(Compliant)	169	56.3%
Women who consumed less than 5 tablets in last week(Non-Compliant)	131	43.7%



# **SOCIO-DEMOGRAPHIC FACTORS:**

Socio-demographic characteristics associated with compliance towards consumption of IFA are shown in table 2.

SOCIO- DEMOGRAPHIC PROFILE	CATEGORY	TOTAL n(%)(n=300)
AGE	<25 YEARS	130(43.3%)
AGE	>25 YEARS	170(56.7%)
	HINDU	240(80%)
RELIGION	MUSLIMS	50(16.7%)
	OTHERS	10(3.3%)
	ILITERATE	86(28.6%)
<b>EDUCATION</b>	PRIMARY	53(17.6%)
	SECONDARY	119(39.6%)
	SR.SECONDARY	28(9.3%)
	GRADUATION	14(4.6%)
SOCIO-ECONOMIC	UPPER	48(16.1%)
STATUS	MIDDDLE	119(39.6%)
	LOWER	133(44.3%)
FAMILY SIZE	3<	41(13.7%)
	3>	259(86.3%)
GRAVIDITY	2<	213(71%)
	2>	89(29.4%)
ANC VISITS	3<	196(65.3%)
	3>	104(34.7%)
RESIDENCE	URBAN	211(70.3%)
	RURAL	89(29.7%)

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OCCUPATION	HOUSEWIFE	169(56.3%)
	JOB	131(43.7%)
ANAEMIA STATUS	NORMAL	143(47.6%)
AIALMA STATUS	ANAEMIC	157(52.4%)

Majority of women fall in **age** group of more than 25 years i.e. 170(56.7%) & 130(43.3%) were from age group less than 25 years.

80% of women were Hindu, 16.7% were Muslims & 3.3% were others.

Majority women belonged to lower **socioeconomic status**(67%), followed by 23.3% to middle class and only 9.7% to upper socioeconomic class.

Most of the women in our study group were **educated** up to secondary school (39.6%) ,28.6% were illiterate;17.6% had taken primary education & only 4.6% were graduate.

86.3% women had **family size** of more than 3, while 13.7% of women had family size of less than 3.

Evaluation of **gravidity** shows that 71% were second gravida or less while29% were third gravida or more.

All women were enquired about the total **no of ANC visits**.49.3% had less than three visits while 50.7% had more had three visits

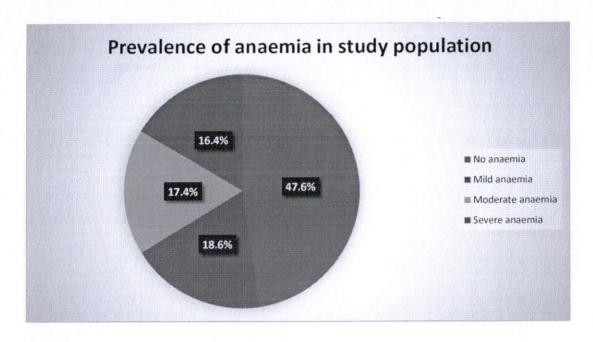
Regarding **occupation** 56.3% women were house wife and 43.7% were in job. 70.3% of women were from urban area 29.7% were from rural areas.

Regarding anaemia status 52.4% women were found to be anaemic while 47.6%were having haemoglobin in normal range

TABLE -3 PREVALENCE OF ANAEMIA IN STUDY POPULATION

ANAEMIA STATUS	HB LEVELS	STUDY POPULATION (n=300)
NO ANAEMIA	(>12g/dl)	143(47.6%)
MILD ANAEMIA	(10-11.9g/dl)	56(18.6%)
MODERATE ANAEMIA	(8-9.9g/dl)	52(17.4%)
SEVERE ANAEMIA	(<8g/dl)	49(16.4%)





(Figure -2)

Among the women of our study population ,52.3% were anaemic. Out of which 18.6% had mild anaemia, 17.4% had moderate & 16.3% were severely anaemic. (figure-2) More prevalence of anaemia may be due to more women who are illiterate & had little or no knowledge of significance of anaemia.

# COMPARISON OF SOCIODEMOGRAPHIC FACTORS WITH COMPLIANCE TOWARDS IFA

Various demographic factors are compared for compliance with IFA in table -4

TABLE -4

<b>FACTORS</b>		COMPLAINT	NON-	P.VALUE
		(n=169)	COMPLAINT	
			<u>(n=131)</u>	
AGE	<25 YRS	71(42.1%)	59(45.1%)	0.5998
	>25 YRS	98(57.9%)	72(54.9%)	
	ILITERATE	10(5.9%)	76(58%)	0.00005
<b>EDUCATION</b>	PRIMARY	25(14.8%)	28(21.4%)	
	SECONDARY	103(60.9%)	16(12.2%)	
	SR.SECONDARY	19(11.2%)	9(6.9%)	
	GRADUATION	12(7.1%)	2(1.5%)	



OCCUPATION	HOUSEWIFE	79(46.8%)	90(68.7%)	0.0068
	JOB	90(53.2%)	41(31.3%)	
	HINDU	138(81.6%)	102(77.8%)	0.0165
RELIGION	MUSLIMS OTHERS	31(18.4%)	19(14.5%) 10(7.6%)	
		1.6(0.50())	25(10.10()	
FAMILY SIZE	3<	16(9.5%)	25(19.1%)	0.0161
	32	153(90.5%)	106(80.9%)	
SOCIO-	UPPER	28(16.6%)	20(15.3%)	0.0001
ECONOMIC	MIDDDLE	106(62.7%)	13(9.9%)	
STATUS	LOWER	35(20.7%)	98(74.8%)	
GRAVIDITY	2<	122(72.1%)	90(68.7%)	0.5106
	2>	47(27.9%)	41(31.2%)	
ANC VISITS	3<	101(59.8%)	95(72.5%)	0.0213
	3>	68(40.2%)	36(27.5%)	
ANAEMIA	NORMAL	120(71.1%)	23(17.5%)	0.0001
STATUS	ANAEMIC	49(28.9%)	108(82.5%)	
RESIDENCE	URBAN	126(74.5%)	85(64.9%)	0.0365
	RURAL	43(25.4%)	46(35.1%)	
KNOWLEDGE	YES	149(88.1%)	72(54.9%)	0.0000
OF ANAEMIA	NO	20(11.9%)	59(45.1%)	
PREDOMINANT	VEG	118(69.8%)	95(72.6%)	0.6097
DIET	NON-VEG	51(30.2%)	36(27.4%)	



Above Table shows comparison of Socio-Demographic factors with the compliance towards IFA tablets among the study group (n=300). It is evident that women of age group less than 25 years comprise 42.1% of

compliant group while age group more than 25 years comprise of 57.9% of compliant group .Age shows no significant association with compliance with

IFA (p > 0.05).

Regarding education it is evident that out of 86 illiterate women 76 were not compliant which constitutes 58% of non -compliant group, followed by women with primary (21.4%), secondary (12.2%), Sr. Secondary (6.9%) & graduation (1.5%). It is quite clear that level of education has direct impact on noncompliance; more is the education, less non-compliance is seen(p < 0.05) On evaluation of occupation house wives were more non-compliant(68.7%) than the women in job(13.3%).

It is noticed that Hindu women constitutes 81.6% of compliant group while Muslims constitutes only 18.4% of compliant group towards IFA tablets consumption. Hence religion show significant association with compliance (p value < 0.05).

74.8% of non-compliant women belonged to lower socio-economic status while only 15.2 % of upper socio-economic status women had shown non compliance. This suggests that non-compliance is more seen in lower socioeconomic status women due to various explainable reasons.

Family size is also found to be a significant variable(p<0.05). Gravidity & dietary pattern (veg/nonveg) have no significant association (p>0.05) Women from urban area were more compliant (74.5%) than women from rural area (25.4%)

Women with less than three ANC visits constitute 72.5% of non-compliant group, while those with more than three visits constitute only 27.5% of noncompliant group. Hence no of ANC visit also has direct effect on IFA compliance.

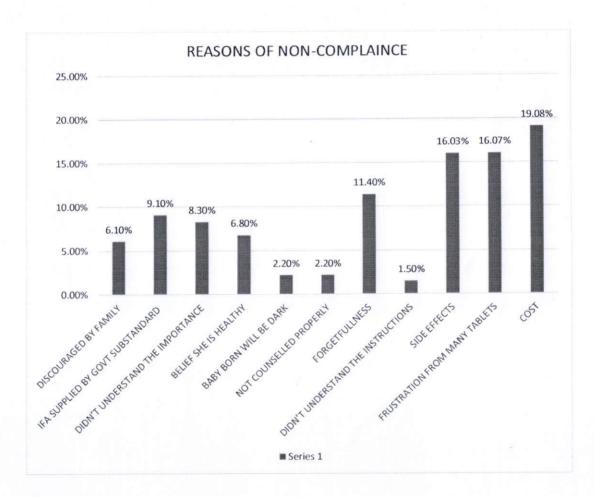
In our study 88.1% of compliant women had knowledge of anaemia while 45.1% of non-compliant women had no knowledge of anaemia which reveals that knowledge about anaemia has significant association with compliance to IFA (p < 0.05).

Regarding anaemia status of women participating in our study population, 52.3% were anaemic. On comparison of association of anaemia status with compliance, it was found that 82.5% of non-compliant women were anaemic while 71.1% of compliant women were not anaemic. Hence, anaemic status of the women was significantly associated with compliance of women to IFA (p<0.0001)



# **REASONS FOR NON-COMPLIANCE:**

Various reasons for non-compliance with IFA in our study population are given in table-5



#### FIGURE-3

we found that 19.08% of women did not take because of cost,16.7% were frustrated with many tablets to be taken during pregnancy.16.03% of patient stopped due to their side- effects while in 11.4% forgetfulness was the main reason. Other reasons included were; IFA supplied were substandard (9.1%), didn't understand the importance (8.3%), belief that she is healthy (6.8%), discouraged by family (6.1%), baby born will be dark (2.2%), not counselled properly (2.2%), didn't understand instructions. (1.5%).



**TABLE-5**Depicts reason of non-compliance among study population.

REASONS OF NON- COMPLIANCE	TOTAL NO. OF PATIENTS	PERCENTAGE (n=131)
	(noncompliant=131)	
1)DISCOURAGED BY FAMILY	8	6.1%
2)IFA SUPPLIED BY GOVT. SUBSTANDARD	12	9.1%
3)DIDN'T UNDERSTAND THE IMPORTANCE	11	8.3%
4)BELIEF THAT SHE IS HEALTHY	9	6.8%
5)BABY BORN WILL BE DARK	3	2.2%
6)NOT COUNSELLED PROPERLY	3	2.2%
7)FORGETFULNESS	15	11.4%
8)DIDN'T UNDERSTAND THE IMPORTANCE	2	1.5%
9)SIDE -EFFECTS	21	16.03%
10)FRUSTRATION FROM MANY TABLETS	22	16.07%
11)COST	25	19.08%



# **DISCUSSION**

Compliance with Iron-folic acid supplementation plays a major role in the prevention and treatment of iron deficiency anaemia particularly among pregnant women whose iron requirement starts at the second trimester and progresses until the third trimester. There is high prevalence of anaemia (54%) in pregnant women in India. Anaemia prevention programme is recently strengthened by Government of India with iron plus guidance with gains from NHRM and support of workers like ASHA, FHW and ANM. In spite of this anaemia in pregnancy still stands as a major health problem. Hence, compliance to IFA pills is an important factor determining anaemia status of women.

In our study compliance rate to iron-folic acid tablet supplements during pregnancy is found to be 56.3% which is comparable to a studies conducted in Mangalore and Pune where compliance was around 64%.(21,22).Similar rates of compliance was observed in study carried out by Kalaiselvi Selvaraj in 2017at Tamil Nadu.(23)

In our study, lower levels of education among the individuals, family size, SE status, <no of ANC visits, knowledge of anaemia were the factors which were significantly associated with compliance of IFA. Similar results were seen in study conducted by Roy et al(24) & Mithra et al(21).

In the present study compliance was better observed in educated and high economic status pregnant women as compared to uneducated. It may be because of the fact that women with higher educational level have better knowledge about the anaemia and therapy and therefore are more compliant. Our results are consistent with the findings of Soraya Sibani in West Iran.(20) Similar results were also reported by Brand et al (1977)(25)

Gravidity, age of women & dietary pattern whether vegetarian or non-vegetarian, didn't show significant association.

Pregnant women who had knowledge about anaemia were more likely to be compliant (88%)than those who had none(11.8%) This result was supported by study reports from Ethiopia and Western Iran (26,20)

The most common reasons of non-compliance found in our study included the cost(19.08%), frustration from many tablets(16.7%), side effects(16.03%). Cost is found to be leading factor for non-compliance, as most of women in study group were from low socio-economic class but were consulting in private hospital. They were buying tablets from the market and not availing free from the govt hospitals & dispensary. Forgetfulness accounted in 11.4% of women



in our study which is somewhat similar to a study done in Haryana by Godara et.al (15). Other reasons for non-compliance including IFA supplied by govt. was substandard(9.1%), didn't understand the importance(8.3%), not counselled properly(2.2%), discouraged by family members(6.1%), belief that she is healthy(6.8%) & didn't understand instructions (1.5%) were more related to the less education & ignorance about self among women of this region.

# **CONCLUSION**

Compliance to IFA during pregnancy is found to be 56.3% in our study. Education level of women, occupation, socio-economic status, no of ANC visits, knowledge about anaemia & family size are leading factors for non-compliance in our study. Therefore need to increase education among girls would be an effective criterion for decreasing non-compliance. Increasing no of ANC visits or regular antenatal check ups and visits by health care workers to provide information & benefits of IFA supplementation to both mothers and their foetus time to time is essential. Also, promoting mothers to visit ANC at least four times can improve their status of compliance with iron-supplementation. Regular intake of iron rich foods should be promoted. Knowledge of health providers regarding NNACP programme need to be strengthened. Also, ANM and ANGANWADI workers should be well equipped with IFA tablets supply. Hence, these interventions can help to increase compliance and better health system in our country.

# **SUMMARY**

Compliance with IFA tablets supplementation plays a major role in the prevalence of Iron deficiency anaemia. A cross-sectional study with 300 antenatal women in their 2 & 3<sup>rd</sup> trimester were taken with the aim to assess the level of compliance and determine the factors associated with non-compliance to IFA supplements among pregnant women attending the antenatal clinic. Overall compliance with IFA was seen in 169 women (56.3%) while 131(43.7%) women were not compliant. Education level of women, occupation ,socio-economic status ,no of ANC visits ,knowledge about anaemia & family size are leading factors for non-compliance in our study. It is to conclude that measures should be taken to increase awareness & knowledge about the importance of regular intake of IFA tablets, iron –rich diet & proper ANC visits.



#### ABBREVIATIONS -

IFA- IRON FOLIC ACID
ANC-ANTENATAL CLINIC
FSFA-FERROUS SULPHATE FOLIC ACID
SE-SOCIO-ECONOMIC STATUS
ANM-AUXILIARY NURSE MIDWIFE
NAACP-NATIONAL NUTRITIONAL ANAEMIA CONTROL
PROGRAMME

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# **Indian Council of Medical Research**

Short Term Studentship

Dear Ms. Sukriti Mishra

You have successfully submitted report for STS-2019. (Reference Id:2019-03345)

For any queries please sent an email to stshrd2017@gmail.com. In case you want to speak to us for queries related to stipend and certificate call on 011-26589440 and for scientific queries or any other matters call on 09984525843(O).

For technical support related to online submission you may call on 26588980, 2658889, 26588707 or 26589335 Extn. 333 or 011-26589440(Direct) and speak to our IT team Sh. Yogesh Kumar Sayal or Sh. Vikas.

Kindly note that your report will be evaluated by experts. If the report is approved, stipend and certificate will be issued between June - October, 2020. For further updates please refer to STS webpage on ICMR website.

	PART-A	<u> </u>	
Reference ID	2019-03345		
Gender	Female		
Student Name	Ms. Sukriti Mishra		
Course	MBBS		
Year	II		
College Name	Santosh Medical College, Ghazi	abad	
College City	ghaziabad		
	PART-B		
Title	Change:- No	Determinants of compliance with iron-folate supplementation among pregnant women attending tertiary hospital	
Aims and Objective	Change:- No		
Methodology	Change:- No		
Guide Name	Change:- No	Dr.Rashmi Saxena	
Any Other Change	Change:- No		
Report	Yes		
Report Attestation Form	Yes		
Institutional Ethics Comittee / Institutional Animal Ethics Committe Certificate / IEC Exemption Certificate	Yes		
Any Other Document	Yes Type:- QUESTIONARRIE		
	PART-C		
Student Name as in Bank Account	Sukriti Mishra		
Bank Account Number	0611830966		
Type of Bank Account	Saving Account		
Name of the Bank	Kotak Mahindra Bank		
Branch Name	kotak mahindra bank , pamposh enclave greaterkailash -1		
Complete Address of the Bank Branch	kotak mahindra bank ,Gr.Flr shp No. G/5-9,11-13,B/2,4,5,7 Plot No.1&2,Local shopping complex,Pamposh enclave,GK-1,New DELHI-110048		
City	New Delhi		
State	Delhi		
PinCode	110048		
IFSC Code	KKBK0000195		
MICR Code	110485025	(3)	

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Copy of Cancelled Cheque	IYes .
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