

Enablers of IFA Tablet Consumption Among Pregnant Women of Rural Bihar

By

Zahid Sarafraz Khan

*Dissertation submitted in partial fulfillment of the requirements of the degree
MBA Hospital and Health Management*

Academic year, 2017-2019



The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

Enablers of IFA Tablet Consumption Among Pregnant Women of Rural Bihar

By

Zahid Sarafraz Khan

*Dissertation submitted in partial fulfillment of award of
MBA Hospital and Health Management*

Academic year, 2017-2019

Care India, Bihar



The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Zahid Sarafraz Khan**, student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Care India (Bihar) February 4th, 2019 to May 1st, 2019**

The candidate has successfully carried out the study designated to his during internship training and his approach to the study has been sincere, scientific and analytical.

The internship is in fulfillment of the course requirements.

I wish him all success in all her future endeavors.

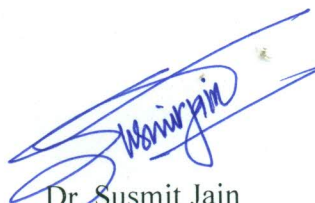


Dr. Ashok Kaushik

Dean, Academics and Student Affairs

The IIHMR University, Jaipur

17 May 2019



Dr. Susmit Jain

Associate Professor

The IIHMR University, Jaipur

**CARE INDIA**

Solution for Sustainable Development

14, Patliputra Colony

Patna 800 013, Bihar

Tel +91-612-2274957, 2274389, 2270464

Fax +91-612-2274957

www.careindia.org

CIN : U85100DL2008NPL178133

CERTIFICATE

The certificate is awarded to
Zahid Sarafraz khan

In recognition of having successfully completed his
Internship in the department of

Bihar Technical Support Programme
and has successfully completed his Project on

**PREDICTORS FOR IFA TABLET CONSUMPTION AMONG
PREGNANT WOMEN OF RURAL BIHAR**

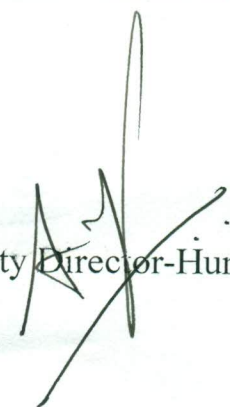
04th FEB'19- 03rd MAY'19
CARE INDIA, BIHAR

He comes across as a committed, sincere & diligent person who has a strong drive
and

zeal for learning

We wish him all the best for the future endeavors

Deputy Director-Human Resources



CERTIFICATE BY SCHOLAR

This is to certify that the dissertation **titled Enablers for IFA table consumption among pregnant women of Rural Bihar** and submitted by **Dr. Zahid Sarafraz khan** Enrollment No 697 under the supervision of **Dr. Susmit Jain** for award of MBA in Hospital and Health Management in Health and Hospitals of the University carried out during the period from **February 4th, 2019 to May 1st, 2019** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.



Signature

1. PREFACE

1.1 ABSTRACT

Introduction - Maternal health in India has been a topic of in-depth discussion. India along with Nigeria contribute to 1/3rd of maternal death worldwide in 2015. Various programs had been launched to meet the required demand of quality maternal care like RMNCH+A, which is under the flagship of NHM. The condition in Bihar is even worse with women at least 4 ANC checkup has marginally increased from 11.2%(NFHS3) to 14.4%(NFHS4) and the women consuming at least 100 IFA tablets is 9.7%(NFHS4). Lack of IFA tablet is the major supply barrier. Among enablers the barrier needs to be countered in a effectivities way like improving the quality of ANC service

Objective - To understand the factors what enables a woman to consumption an IFA tablet during pregnancy for improved coverage and adherence of IFA tablets

Methodology -

Study design : Qualitative cross-sectional study

Sample : Total sample of 12 in-depth interviews were conducted in Five districts of Bihar.

Sampling : Convenience purposive sampling technique was used, the in-depth interview was conducted at five district Siwan, Araria and Buxar, Munger, and Gaya district of Bihar. the selection of the district was strictly based on time, convenience, logistic arrangement, and financial constraints. the important four parameters which were used for selection of the respondent were based on-

1. Those respondents where ASHA was available denoted as A-Y.
2. Those respondents where ASHA was not available denoted as A-N
3. Those respondents which are close to the facility were denote as F-N
4. Those respondents which are not close to the facility were denoted as F

Method of data collection:

From each district respondent were selected with one variable like A-Y, A-N, F-F, F-N. Each respondent was selected based on the above criteria once the selection process was done, and identification of the pregnant women whether she is taking IFA table continuously for more than 21 days will be confirmed by interviewer himself. the question was asked by the interviewer and debriefing was carried out by the note taker.

The questions are open ended questionnaire focusing on the month of pregnancy, number of ANC visits, food diversity before and during the pregnancy, parity, IFA consumption and what motivates them to take the tablet and continue them, any complication during any previous pregnancy (if any).

All the interview was recorded after taking proper informed consent from the respondent and thematic debriefing was carried out simultaneously by the note taker. Each day maximum of two interviewer were conducted with transcription to be completed within the next 24 hours from the time of completion of interview this will ease the process with maximum data will be captured.

Analyses will be done using transcription which will coded using ATLAS.ti and those codes were analyzed using excel sheet and manual method

Conclusion

- The need to strengthening the IFA supplementation regime through FLW as say still can serve as the backbone of our health care delivery system. Most respondent as is evident from the results are in contact with these FLW in one way or the other so strategic plan should be devised foe deliverance of that message to the beneficiaries
- Analyzing the result, we synthesize a formulative research on pre and post-natal IFA supplementation. the barriers are clearly depicted and almost all are familiar
- Each context studied few enablers were identified, so research is essential prior to design context-specific intervention that motivates pregnant women, their families ,health care providers to increase access as well as consumption

Improved counselling can address concern found in IFA supplementation program me with early contact, frequent resupply, and more personal support for pregnant women

1.2 ACKNOWLEDGEMENTS

Words put on paper are mere ink marks, but when they have a purpose there exist a thought behind them.

I too have a purpose to express my gratitude towards those individuals without their guidance the project work would not have been possible.

It is with a deep sense of gratitude that I acknowledge the cooperation and support of “Care India, Bihar” which gave me the unique privilege of completing my project and provided me an opportunity to interact with the various personnel.

The structure and content of this topic has been deeply influenced by many people for whom I wish to express my gratitude. I am deeply beholden to the Dr. Tanmay Mahapatra and the management of Care India, Bihar for providing me with the opportunity to undergo my Dissertation/internship in the organization.

I would like to express my intellectual debt of gratitude to my corporate guide Mr. Kaushik for their continued interest and valuable guidance in my work. They have really devoted their precious time in guiding me in the project from starting till the end.

I am also thankful to the other members of the Bihar technical support group and the staff as they supported me throughout my work. They guided me and gave their time to help me directly or indirectly with the report work.

Also, I would like to thank col. Dr. Ashok Kaushik (Dean Academics and student affairs, IIHMR Jaipur) to provide me such a great learning opportunity. Finally, my sincere regards to my mentor Mr. Susmit Jain (Professor& Guide) for his support. A Special thanks also goes to all the teaching and non-teaching staff of my institute and my friends.

1.3 TABLE OF CONTENTS

1. PREFACE

1.1 Abstract.....	3
1.2 Acknowledgement.....	5
1.3 Table of Content.....	6
1.4 Abbreviations.....	7

2. MAIN TEXT

2.1 Introduction.....	8
2.2 Methodology.....	12
2.3 Analysis.....	14
2.4 Results.....	15
2.5 Conclusion.....	23
2.5 Recommendation.....	21

3. SUPPLEMENTARY

3.1 Annexure – IFA Guidelines.....	24
3.2 References.....	28

s1.4 ABBREVIATIONS

ANM	-	Auxiliary nurse midwife
ASHA	-	Accredited social health activist
FLW	-	Frontline worker
SHD	-	Self Help Group
IFA	-	Iron Folic Acid
ANC	-	Aten natal check up
NHM	-	National Health Mission
WHO	-	World Health Organization
NFHS	-	National Family Heath Survey
RBC	-	Red Blood Cells
PHC	-	Primary Health center
MDR	-	Maternal death center

2. MAIN TEXT

2.1 INTRODUCTION

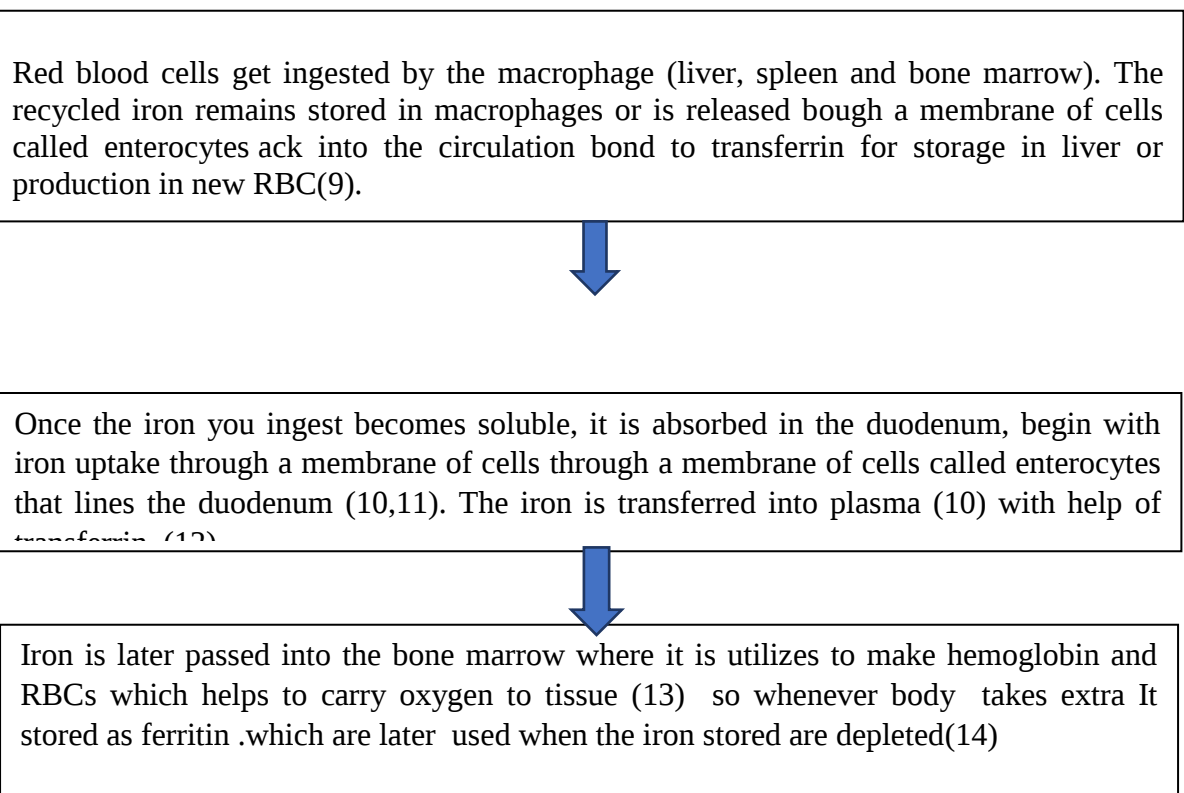
Maternal health in India has been a topic of in-depth discussion. India along with Nigeria contribute to 1/3rd of maternal death worldwide in 2015(1). Various programme has been launched to meet the required demand of quality maternal care like RMNCH+N, which is under the flagship of NHM. The maternal care which includes all the facilities that a mother receives during pregnancy, child birth, and post care. One such important concept during a maternal care is the antenatal care. The care which the mother receives once she conceives till, she delivers. The ANC checkup includes some fundamental things which need to be accomplished during each visit, the number of visits which a pregnant woman will receive according to WHO is 4ANC checkup, but the Indian government has also agreed on the minimum 3 ANC checkup is also enough. During each visit all the various treatment protocols are to be followed which include thorough abdominal examination, blood pressure measurement, weight ,height and urine and stool testing, 2Teatnus Toxoid with one month apart and iron folate tablet , minimum to be consumed by the pregnant women is 100 depending upon the severity of the anemia The main objective here to deliver a healthy baby and keep the mother safe during and at the time of delivery. ANC care check lays a cornerstone and is most effective method for the deliverance of IFA tablet at district and block level.

However, the utilization of ANC is at dismay performance. Though the utilization in India has increased from 37% (NFHS3) to 51.2%(NFHS4), and consumption of Iron folate tablet from 15.2%(NFHS3) to 30.3%(NFHS4). The condition in Bihar is even worse with women at least 4 ANC checkup has marginally increased from 11.2%(NFHS)3 to 14.4%(NFHS4) and the women consuming at least 100 IFA tablet is 9.7%(NFHS4) as compared to 6.3%(NFHS3).It is now an established fact that proper nutrition to women before ,during and after pregnancy not only helps to secure the mother's life but also help child to grow healthy through its 1000days of crucial period(black Etal 2013).It is here to mention that the most vulnerable and susceptible to this ill fate to pregnancy women in India is due to the prevailing long standing gender inequality(2) ,which makes women at risk of being anemic causing pre term delivery, low birth weight child and poor neonatal health (3).

Anemia is still the continuous persistent threat even though India being the first developing country to implement the Anemia prophylaxis programs in 1970 consisting of ANC and IFA supplementation containing 100g elementary iron and .5mg of folic acid daily(4) .So it is imperative here to understand that most of the women in India particularly in Bihar enter the pregnancy anemic which further increase their chance of being at risk (4).Also the most women especially in developing countries have very low level of knowledge regarding anemia and subsequently most of them do not consider it a problem that needs attention .(5)

Since most our discussion will be focused on the iron folic acid consumption, we need to understand the mechanism by which iron is being absorbed, factors influencing the absorption and iron intake, transfer and storage in human body.

Iron storage transfer and mechanism of absorption and factors influencing the absorption.



Average content of iron in a normal adult male is 4gm and in female is 2.1gm (6), of which maximum iron is concentrated in hemoglobin, iron store sites also contain approximately 1gm. Some iron is lost as sloughed skin. An average 1mg iron additional is lost during the menstruation of women. Some of the iron is lost during any other physical injury or trauma. In most instance our body will retain 5-10% of iron from food, (2). The daily amount of iron that is lost from our body through stool is automatically respond to the less absorption when the body has enough iron store. (1,7).

So based on the above need and requirement of iron folic acid in our body the maternal and neonatal care developed by the Department of Making pregnancy safer WHO has set a guidelines for the health provider particularly in context with Indian system they will include ANM, ASHA to provide during antenatal and postpartum care(6).

- Every pregnant woman a dosage of 60mg iron +400µg folic acid daily for 6 months. If six months are not sufficient to achieve the treatment during pregnant then either continue the prophylaxis postpartum or increase the

- Treat anemia with doses of 120mg iron daily for three months

- Give iron supplementation even if folic acid is not available.
- Examine or screen all women for anemia during antenatal and postpartum visits.

- If the prevalence is more than 40%, advice the patient (pregnant) to continue the prophylaxis for three months.

- Refer women with severe anemia at a higher level of care if they are in the last month of pregnancy, have signs of respiratory distress or cardiac abnormalities such as edema.

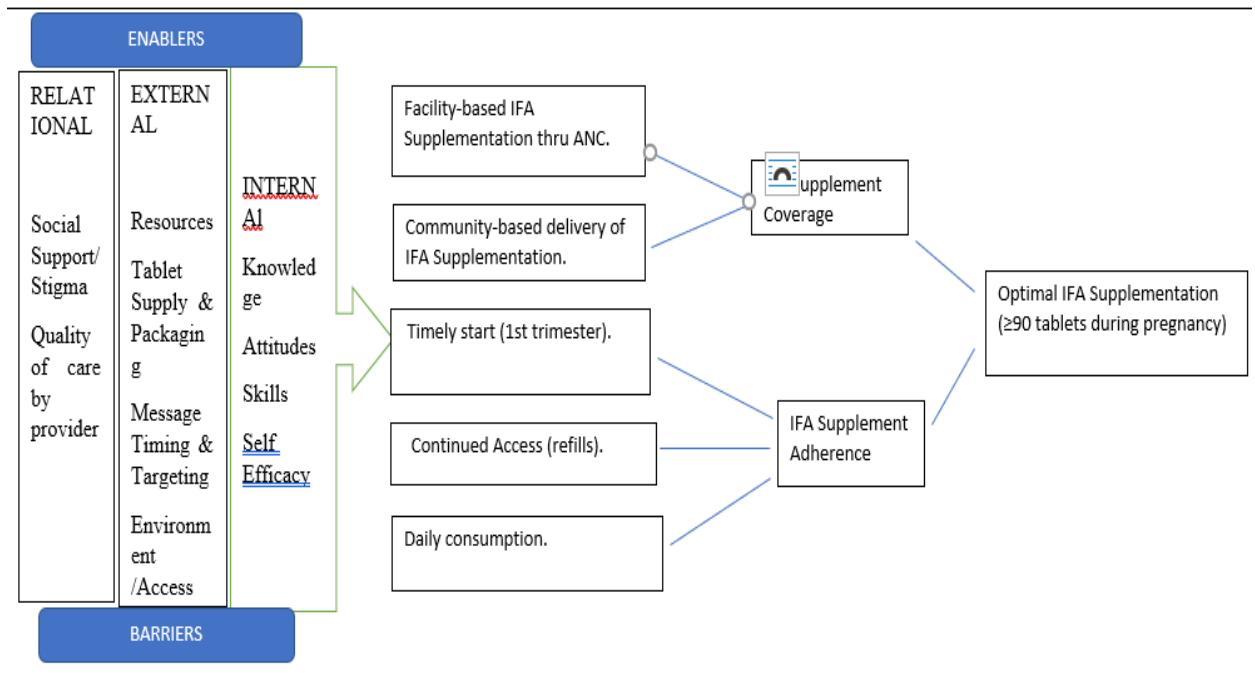
Lack of IFA tablet is the major supply barrier ⁽⁵⁾,if however the supply is maintained it doesn't give the guarantee that tablet reach to beneficiaries or the health providers will have enough to motivates the patient.(7)

From the demand side whether the service that is being provided is culturally, economically, geographically, socially acceptable and accessible is to be considered and whether the people (beneficiaries) from whom the service is being provided consider the importance of the service. Some article has also mentioned various barriers like not understating the meaning of anemia, not knowing or given any tablets why she should take IFA tablet, not informed about the temporary negative side effects like nausea, vomiting, constipation, dizziness, dark stool, health or front-line workers not involving community participation even IFA can harm your baby. Non availability of health care providers at centers be in PHC, ANC camps or even village and health sanitation sites has a demotivating element for the pregnant women (8).Among enablers the barrier need to be countered in a effectivities way like improving the quality of ANC service, understanding the importance of identification of first trimester and making the beneficiaries understand the importance of it has a huge impact on IFA consumption⁽⁸⁾

Logical framework of IFA supplementation program (8)

Figure1

1



2.2 METHODOLOGY

Objective:

To assess the factors what derives a woman to take an IFA tablet during pregnancy.

Study Settings:

The study was conducted in five districts of Bihar, (Gaya, Munger, Kishangunj Siwan, Araria and Buxar) for my dissertation project. As it is a qualitative, the focus is on perception, cogitative, psychology and motivational component that made them more adherent with which a woman is taking a IFA table and what are the ideas coming through her mind while taking or continuing an iron table.

Study Design:

Qualitative study aiming at thematic deep dive top develop newer insight based on grounded theory.

Study Participants:

Pregnant women were the focus of the study.

The important four parameters which were used for selection of the respondent were based on -

1. Those respondents where ASHA was available denoted as ASHA-YES (AY).
2. Those respondents where ASHA was not available denoted as ASHA- NO (AN).
3. Those respondents which are close to the facility were denote as FACILITY-NEAR (FN).
4. Those respondents which are not close to the facility were denoted as FACILITY - FAR(FN).
5. The term facility used in this qualitative study is the block PHC, and the village where the PHC is located will be considered as close to the facility and the rest were to be considered as far from the facility

Inclusion criteria of respondent:

- Those pregnant women should be taking IFA tablet for more than 21 days, this will help to understand the compliance.
- The respondent (pregnant women) or beneficiary should be at least 3 months pregnant or above.
- Physical verification of IFA table by the interviewer.

Exclusion criteria of respondent:

- The pregnant women who is not consuming IFA tablet, or has been taking earlier but currently is not taking
- Pregnant women taking IFA for less than 21 days.
- Pregnant women physically challenged or mentally unstable, cannot understand or express her view or opinion

Sample Size and Sampling:

Total sample of 12 in-depth interviews were conducted in five districts of Bihar. convenience purposive sampling technique was used, the in-depth interview was conducted at five district Gaya, Munger, Siwan, Araria and Buxar. Among these district three respondents were selected with one variable like A-Y, A-N, F-F, F-N.so we had three

respondents belonging to ASHA-Yes category, three from the Facility-No category similarly with other two categories making a total sample of 12 from all district.

Data Collections Techniques:

From each district three respondent were selected with one variable like A-Y, A-N, F-F, F-N. Each respondent was selected based on the above criteria once the selection process was done, and identification of the pregnant women whether she is taking IFA table continuously for more than 21 days will be confirmed by interviewer himself. The question was asked by the interviewer and debriefing was carried out by the note taker.

The qualitative interview guide was written in Hindi, translated into English, and back translated into Hindi. The interviewer guide were divided into domains like pregnancy care. Food diversity, perceived benefits side effects

The questions are open ended questionnaire focusing on the month of pregnancy, number of ANC visits, food diversity before and during the pregnancy, parity, IFA consumption and what motivates them to take the tablet and continue them, any complication during any previous pregnancy (if any)

All the interview was recorded after taking proper informed consent from the respondent and thematic debriefing was carried out simultaneously by the note taker. Each day maximum of two interviewer were conducted with transcription to be completed within the next 24 hours from the time of completion of interview this will ease the process with maximum data will be captured.

Maintaining the quality of the data that was collected, each audio had to be listened at least three times before it is to be transcribed, the transcribed data was again matched with audio by supervisor to check whether all the data has been captured, proper dialect of the respondent is maintained as is in the audio file. So, each audio file will have to through the same process. Regressive training was conducted for three days to understand the basic concept of qualitative analysis, various interview technique, transcription and coding procedures. So, quality of interaction and quality of recording were maintained at each in-depth interview.

2.3 ANALYSIS

The key features from the respondents from all categories (A-N, A-Y, F-F, F-N) were recorded in an audio file and then transcribed in Hinglish, these transcribed were coded using ATLAS.ti. These codes were transposed into excel sheet where manual interpretation was done.

2.4 RESULTS

Most of our respondent which we interviewed were in second and third trimester, living in a joint family, housewife's, illiterate women who were consuming IFA tablet continuously for the past 21 days and before any interview was finalized physical verification of the IFA tablet was done by the interviewer.

Diet change before and after conceiving:

All the respondent had at least change in their diet after the conception of pregnancy and were more inclined towards saying they have started eating more than their usual with variety like dry fruits, protein supplements, milk and with taking food in increments

“Thoda thoda antral ke baad humein khana hota hai, normally humein teen baar khate the lekin ab zyada time khate hai”

(Usually we should take food in intervals, normally we used to eat three times but now it has increased)

Few respondents believed that their diet has reduced after conception mainly because of nausea vomiting)

“Mann nahi karta, phela sab khata the ab kuch b khanae ka mann nahi karta”

(Earlier I used to eat everything but now after pregnancy I don't feel like eating.)

Pregnancy care

Coverage and utilization of pregnancy care.

The respondent was asked regarding ANC checkup, place and time where these check up were being carried out. All the 12 respondents had their ANC check up at the Anganwadi center with few obtaining for private hospital. All respondent was being checked for blood pressure, blood test while the ultrasound and stool testing were performed at the private hospital as reported by most of the respondents. While most of the respondent believe ANC, checkup is for only tetanus toxoid injection **“suii laganae jatae hai** “(I had gone to get injection) is referred to as ANC checkup. Another common understanding among the respondents even for those who had gone for private check had received the IFA tablets from the ASHA and ANM. So, the supply of IFA is enough which further raises an possibility that even though the supply of IFA is enough the pregnant women are not actually utilization /consuming for their benefit.

Most of the respondents knew that the ANC checkup is a must for every pregnant but their constant deferral to go and the reason they gave I quote “**time nahi milta** “(we don’t get time) and “**aacha nahi lagta**”(I don’t feel like going).there is need regarding their awareness level about the utilization of ANC services .

Also, most of the respondent had their first ANC check up in late second trimesters which further stress on the need of early registration among the pregnant. Few respondents who already were previously pregnant has not any different point of view in comparison to those women who were pregnant for the first time for attending the mandatory three ANC checkups,

Information regarding the IFA tables

The respondent in this section were asked regarding who gave you the tablet, where they have received the tablet, how many times they have received it, at what month of their pregnancy they have received the tablet and various methods of taking the tablet.

- **Who gave you this tablet/Where did you receive this tablet.?**

Most of the respondent had received the IFA tablet from the ASHA/ANM at Anganwadi and most as mentioned earlier are continuous consuming these tablets. few respondents have a private checkup, but they also received IFA from the Anganwadi.

- **How many times have you received this tablet/Please tell us the month of pregnancy when you received these tablets?**

Those respondents which were under the category of Facility near and ASHA present would receive their IFA tablet in their 4 months of their pregnancy while the respondent which were in the category of Facility Far and ASHA No usually receive the tablet from 5 month of their pregnancy. The respondent from each category said that they received at least once of this IFA. The number of those tablets vary from 30 to 70 tablets and most of the respondent had consumed more than 30 tablets already. Few respondents did not know how much she received, how much she had received or consumed. Duration of consumption of this IFA from 3-6 weeks from most of the beneficiaries.

- **In which month of pregnancy, you started taking these tablets/Please tell us about the prescribed Time and method for taking this tablet.**

Most of the respondent whom were interviewed had taken their IFA from the 4th month, few respondents from the 5th month of their pregnancy and few did not remember that. The respondent who knew when they have taken an IFA tablet were of ASHA Yes and Facility Near category while those respondent who have taken IFA either late or did not remembered the time when they have started taking the

tablet were of either ASHA No and Facility Far category giving a possibility suggestion that there is positive relations between presence of an ASHA and facility Near which has created an impact of these respondent to remember when these have taken these IFA tablet.

About method of consuming IFA tablet, most respondent consumed with water at evening after meals while few respondents were taking IFA tablet with milk. Few respondents were taking IFA Tablet in the morning after meal and one respondent used to take IFA thrice in day morning, afternoon, and evening

R: ek baar 12 baje ... ek baar saanjh ko ... fir raat mein

(One time at 12, then around evening and last one at night).

What instructions/directions you got when you did receive this tablet

In this section the respondent were asked about the counselling who provided it, FLW counselling, counseling provided by the doctor and purpose of these tablet, result after consuming of tablets and impact of these tablet on yours and child health.

- **What is the purpose of this tablet?**

Most of the respondent received the counselling from the ASHA regarding the purpose of the table, few respondents received from the doctor and ANM. few respondents will a counselling on the benefit it was rich source of iron, and few received counselling regarding increase the strength of self and the child

- **What will be the result after consuming this tablet/How this tablet will impact the health of mother and child?**

Most of the respondent had not any knowledge and suggested that the ASHA/ANM/Doctors had not informed them about why they should take this tablet and how this tablet will impact their health except few who said that they were informed this tablet will benefit their child and their own health

Please tell us about the reasons, you started taking this tablet

In this section of open ended discussion with the respondent we usually enquired about the perception or thought for starting the tablet, what they keep in mind to remember that to take a tablet and various thoughts after taking it every day and reason for discontinuing and more importantly various reason that they had started again taking the IFA tablet

- **Please tell us about your thought for starting (consuming) this tablet**

For starting or consuming the IFA tablet different respondent have different their own reason to start the tablet, some respondent has given unique reason like

“jaise goli khaye to bohat theek hai badan m”

Whenever I take tablet, my body seems to be fine)

“dawa nahi khayega tou bemari ho”

(if I don't take the iron tablet, I will fall sick)

“After three months mtlab iron ki goli start ho jati hai regular, tou khane se kya hai matlab haemoglobin proper rahega use blood ki kami nahi rahegi aur bache ka growth bhi ache se rahega kyuki bache ka jo growth hota hai , wo body ki wajah se hota hai aur kisi ka bhi growth agar blood proper hoga .. tou growth acha hoga

(After three months iron tablets are started, after taking them it maintains hemoglobin level, when blood is proper so growth of the child will be normal because the growth of the child depends on the body of the mother and which in turn depends on the blood content of the body so growth will be proper)

“nahin thakan kamzori ke liye nahi hum khate hai first wala bacha ke samay mein mera blood kam tha tou hum samajhte hai ke blood ke liye hai tou khayega tou acha hi hoga islye khate hai”

(I don't take the tablet because of weakness, I ate them because during my first pregnancy I had a very low level of blood in my body, so I understand I need to consume these tablets so this time everything would went well).

deh hath thar tharata haina ... wahi sochte hai kaiso theek hojayega

(this (left hand) had tremors, I am always thing how to correct it that is why I am taking)

Different respondent has given their perspective about their reason of consuming tablets while a few respondents knew it is good for the growth of the child and the mother while other thought it will help in one or way or the others like it usually calms my body, helps to stop the tremors etc.

- **Please tell us about your thoughts after taking it every day/How she remembers to take it every day**

Since the selection of the respondent was based that they had been taking these IFA tablet from the past 21 days so it was very imperative to had the discussion about theirs thoughts of taking it while most of the respondents

and more importantly to identify among all the four categories (AN,AY,FF,FN)their perceived benefits about the thoughts of taking it every day. Most of the respondents had a perceived benefit regarding the consumption of IFA tablets like it will benefit their child, self, helps to reduce the anemia like symptoms, increase the strength of baby while a few respondents believed that they are taking the tablet because they were asked to take it

Another important aspect was to consider the ideas they had when they would remember that they had to take the regularly .some respondents believed that they got worried if they doesn't take the tablet or falls sick while a few thought it is important so just remember it and one also thought it is good for her health and for t baby's health

Some of important discussion which I had quoted here are as

“ab baithe rehte hain, kaam jaldi khatam ho jata hai, phir sochte hain goli khana hai to phir kha lete hain”

(whenever I am idle, or the works finishes on time then I thought of taking a tablet which then take)

“sab bhool jaye lekin iron ki goli bacha ke liye acha hai tou usko yaad karke daily kha leti hoo”

(I forget almost everything, but this tablet of iron is good for my baby so how can I forget to not to take it daily)

“mein jaisa khayik baad dawai tou yehi se tani chinta rah”

(I usually get worried if I don't take the tablet)

ke mera swasth sahi rahega. isliye nahi bhoolti hoo

(My health would remain good that is why I don't forget to take the tablet)

- **Please tell us about your continuity of tablet taking. (if there are any gaps, why did you re-start**

Most of the respondents had been taking the IFA tablet continuously, with most of them feel sound and secure after consuming it while other had good feeling while a few other respondents had a perceived benefit they do not feel any weakness, a respondent also said they it reduces the abdominal swelling.

Since as mentioned earlier most of the respondent had been taking the IFA tablets continually some of the respondent had earlier left the tablet due to side effect which later on they started again because of the counselling they receive from the ASHA/ANM and since they have restarted they are feeling better , increased in strength and the side effect have eventually subsided by itself

How do you feel after taking this tablet? Please tell us about tha

In this section the respondent were asked the time when they were not taking tablet usually the pre pregnancy period and now after they have conceived and during pregnancy they are consuming the time is there any difference they feel before and after consuming the table .also since most of the respondent have been consuming the tablet is there any difference they feel when they started taking the tablet and after continuing it for some time

- **In initial phase and in Current phase**

Most of the respondent mentioned that that when they started taking the IFA tablet , they experience some side effects like constipation , vomiting which later subsided eventually on its own , some respondent believed they were able to work better without getting exhausted or tired soon in comparison to earlier when they were not taking the IFA tablet during the same period of pregnancy some of respondent also indicated that they did not feel the difference as they were before taking the tablet they are feeling the same way.

I: “farak matlab kya farak pada tha pehle aur dawai khane ke baad mein”

(what was the difference before and after consuming the tablet

R: “bas aise hi pet ut phoolta tha tou theek hogaya tha”

(Earlier I used I have swollen abdomen now that is ok)

- **matlab pehle kamzori zyada lagta tha ab jab goli kha rahi hoo na. tou lagta kamzori jaise. ab ae hai hai ke kam lagta hai**

(earlier I used to feel weakness, but now I feel the weakness had reduced)

What will happen if all given tablets will be consumed?

In this section the respondent were enquired if they stock out or if the iron tablet is consumed all what would they do next to get another quota IFA table

Most of the respondent said they will go to Anganwadi center or to meet the ASHA to get the next dose of IFA tablet or even Asha would also visit their home at some point of time and would give those tablet in almost all the categories (AY,AN,FN) while a few respondent seemed to be very much concerned that they need to collect the another IFA tablet strip

Strangely enough possibility of most of the respondent were least concerned about the exhaustion of the IFA tablet and even responded when they will get the chances to collect the tablet they will as there was no sense if urgency or any priority to collect IFA tablet

Please tell us if any complications occurred during pregnancy

The interviewer in this section had asked about the complication of both current pregnancy and if she had earlier pregnancy complication regarding that

- **In previous and Current Pregnancy**

Most of the respondents among those who were previously pregnant or had earlier pregnancy said did not face any complication during the previous only a few in fact only one reported that she had complication during her previous pregnancy that her water broke at 8th month of her pregnancy referring to she had preterm baby .

She said and I quote

pani gir raha tha udd maheene se

(the water broke at 8th month)

While most of the respondent have complaint about nausea, vomiting swelling in feet and hand as the common complication of their current pregnancy. however, few responded had pain in abdomen, dry mouth, lack of interest and pain in the neck as their common pregnancy complication

Please tell us about the consumption of this tablet in your previous pregnancies and for how many months you took this tablet?

The respondent who were earlier pregnant were asked about the details of their earlier consumption of IFA tablets, the beneficiary most of them had started consuming IFA Tablets between 4th to 6th month of their pregnancy and the few respondents did not remembered. however, it could be concluded that previous consumption had little or no impact on their current utilization of their IFA tablets

How else you got aware about taking this tablet

In this section the pregnant women were enquired about the mode by which she got to know about the IFA tablets like TV/Radio/Newspaper/Mobile/Poster/Hoardings/Pamphlets. However, the most respondent said they were the first to take the IFA tablet in their household, did not receive information regarding IFA use and benefit from any source because most of the respondents were belong to the rural Bihar and had hardly any access to these information sources.

Some of respondent said they had seen their family discussing about the benefits of the IFA consumption

Most of the respondent when asked about the Self-Help Group (SHG) Were knowing that such group existed but none respondent was part of these group neither had information about what these groups functions or some topic to be discussed at these meeting/groups

Side effects of IFA tablets

Most of the respondents reported side effects of an IFA tablet. The common being constipation, irritation, vomiting, pain in the abdomen, black stool, and burning sensation of the tongue. These are one of the reason pregnant women are not adherent to the use of the IFA tablet. However, most of the women had reported that these side effect subsides once the tablet are being consumed continuously.

2.5 CONCLUSION

While analyzing the result we synthesize a formulative research on pre and post-natal IFA supplementation. the barriers are clearly depicted and almost all are familiar .However the predictors ,what derives a woman to take a IFA tablet among those women living in the same external environment was a challenge to counteract .the perception of an idea that these tablets would keep her health and her baby's health safe and secure would help to understand and learning how internal (personal)and external woman experience 'could help to devise a strategy for IFA implementation program. These perceived benefits are necessary to outweigh the social, financial, physical barriers for IFA consumption, there is an enough literature available that has shown a positive influence due to these perceived benefits of increased consumption of IFA tablets. A message can be formulated to explain the therapeutic and preventive value of IFA supplementation which can be more appealing and conceiving

The need to strengthening the IFA supplementation regime through FLW as say still can serve as the backbone of our health care delivery system. Most respondent as is evident from the results are in contact with these FLW in one way or the other so strategic plan should be devised for deliverance of that message to the beneficiaries

Timely message and early detection of can enable to support and strengthen the effort as the literature evidence is present the late detection of pregnancy is associated with increased

anemic prevalence. Early detection of pregnancy can prompt early alternative for programmers searching alternative strategy at community level

Multiple stakeholder and taking ownership would improve the IFA adherence and we should be creating an environment where it is norm to take a one tablet a day and iron supplementation during pregnancy for women

3. SUPPLEMENTARY

IFA Guide lines

Introduction

‘
-

- 1) Namaste! How are you? How about your health?
- 2) Is it your Husband's house or Maternal house?
- 3) Who all are living with you here?
- 4) Please tell us about your age, acquired education and work.
- 5) How many children you have?
- 6) Please tell us about the current month of this pregnancy.
- 7) Please tell us about your diet, also, if any changes occurred in diet before and after conceiving.

Interview-Instructions

Please tell us about the Check-ups during current pregnancy.

- Place of check-ups (Number of check-ups, months (when check-ups were conducted).
- Blood test, Urine test, Ultrasound, Weighing, BP.
- In which month of pregnancy first check-up was done?
- In which month pregnancy the TT was administered?
- What else did you receive during check-ups?
- Please tell us about your diet, before & after conceiving.

1. Please tell us about this tablet you are taking.

- Who gave you this tablet?

- Where did you receive this tablet?
- How many times have you received this tablet?
- Please tell us the month of pregnancy when you received these tablets.
- In which month of pregnancy, you started taking these tablets?
- Please tell us about the prescribed Time and method for taking this tablet.

2. What instructions/directions you got when you did receive this tablet?

- What is the purpose of this tablet?
- What will be the result after consuming this tablet?
- How this tablet will impact the health of mother and child?

3. Please tell us about the reasons, you started taking this tablet.

- Please tell us about your thought for starting (consuming) this tablet.
- Please tell us about your thoughts after taking it every day.
- Please tell us about your continuity of tablet taking. (if there are any gaps, why did you re-started?)

4. How do you feel after taking this tablet? Please tell us about that.

- In initial phase
- Currently

5. What will happen if all given tablets will be consumed?

6. a) Please tell us if any complications occurred during pregnancy?

- In previous pregnancies
- Current Pregnancy

b) Please tell us about the consumption of this tablet in your previous pregnancies?

- For how many months you took this tablet?

7. How else you got aware about taking this tablet?

- Have you seen Family & Relatives taking consuming this tablet?
- Have you seen Family & Relatives discussing about this tablet?
- If anyone discussed during SHG meetings?

IDI NO.	:	
Ref. Audio File Name	:	
Date	:	
Category	:	
Place of Interview	:	Sasuraal/Maaika/Others
Name of Facilitator	:	
Name of Note Taker	:	
Village	:	
Block	:	
District	:	
Audio Duration (Min)	:	

परिचय: introduction

साक्षात्कार-निर्देश:interview instruction

इस गर्भावस्था के दौरान स्वास्थ्य जाँच के बारे में बताएं :

Tell about health check during this pregnancy

आप जो ये गोली ले रहे हैं थोरा उसके बारे में बताईये:

Tell me about what these tablets are taking.

जब आपको ये गोली मिली तो आपको इसके बारे में क्या-क्या बताया गया ;

When you got this tablet, what were you told about it?

गोली के सेवन के शुरु करने के कारण बताएं:

Reason for starting the tablet intake

गोली खाने के बाद आप कैसा महसूस करने लगी उसके बारे में बताएं

Tell me about how you felt after eating a pill

मिली हुई गोलीयों के खत्म होने के बाद के बारे में बताएं

Tell us about what often you do after you have consumed all the iron tablet

इससे पहले की गर्भावस्था के दौरान किसी तरह की दिक्कत या परेशानी के बारे में कुछ बोलिए
Before speaking about some kind of problem or problem during pregnancy before

इससे पहले की गर्भावस्था के दौरान आयरन की गोली का सेवन के बारे में बताये
During previous pregnancy, tell us about the consumption of iron tablets

आपको इस गोली के सेवन के बारे में और किस-किस तरह से पता चला
How do you got to know about these iron tablets?

References

1. Kumar V, Singh P. How far is universal coverage of antenatal care (ANC) in India? An evaluation of coverage and expenditure from a national survey. Clin Epidemiol Glob Heal. 2017;
2. Osmani S, Sen A. The hidden penalties of gender inequality: Fetal origins of ill-health. Econ Hum Biol. 2003;1(1):105–21.
3. O. O, C. H, T. Ø, O. O, R. M, R.T. L, et al. Factors associated with prenatal folic acid and iron supplementation among 21,889 pregnant women in Northern Tanzania: a cross-sectional hospital-based study. BMC Public Health [Internet]. 2012;12:481. Available from: <http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L366359490%5Cnhttp://sfx.library.uu.nl/utrecht?sid=EMBASE&issn=14712458&id=doi:&atitle=Factors+associated+with+prenatal+folic+acid+and+iron+supplementation+among+21,889+pregnant+wome>
4. Chatterjee N, Fernandes G. “This is normal during pregnancy”: A qualitative study of anaemia-related perceptions and practices among pregnant women in Mumbai, India. Midwifery [Internet]. 2014;30(3):e56–63. Available from: <http://dx.doi.org/10.1016/j.midw.2013.10.012>
5. R. G, E. D, L. E, E. A, R. G, E. H, et al. Women’s perceptions of iron deficiency and anemia prevention and control in eight developing countries. Soc Sci Med [Internet]. 2002;55(4):529–44. Available from:

<http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed8&NEWS=N&AN=34722595>

6. WHO. Iron and folate supplementation, Intergrated Management of Pregnancy and Childbirth (IMPAC). 2016;
7. Sununtasuk C, D'Agostino A, Fiedler JL. Iron+folic acid distribution and consumption through antenatal care: Identifying barriers across countries. *Public Health Nutr.* 2015;19(4):732–42.
8. Siekmans K, Roche M, Kung'u JK, Desrochers RE, De-Regil LM. Barriers and enablers for iron folic acid (IFA) supplementation in pregnant women. *Matern Child Nutr.* 2018;14(July):1–13.
9. Barton JC. Iron deficiency. In: Rakel RE, Bope ET, eds. *Conn's Current Therapy*. Amsterdam, the Netherlands: Saunders/Elsevier; 2008:385-389.
10. Trinder D, Fox C, Vautier G, Olynyk JK. Molecular pathogenesis of iron overload. *Gut.* 2002;51(2):290-295.
11. Roy CN, Enns CA. Iron homeostasis: new tales from the crypt. *Blood.* 2000;96(13):4020-4027.
12. Huebers HA, Josephson B, Huebers E, Csiba E, Finch CA. Occupancy of the iron binding sites of human transferrin. *Proc Natl Acad Sci USA.* 1984;81(14):4326-4330.
13. Iron [definition]. In: Venes D, ed. *Taber's Cyclopedic Medical Dictionary*. 20th ed. Philadelphia, PA: F.A. Davis Company; 2005.
14. Centers for Disease Control and Prevention. Recommendations to prevent and control iron deficiency in the United States. *MMWR Recomm Rep.* 1998;47(RR-3)
- 1-36. <http://www.cdc.gov/MMWR/preview/mmwrhtml/00051880.htm>. Accessed April 9, 2008.