

Assessing Reasons for Low IFA Tablet Consumption
Among Pregnant and Lactating Women of Bahraich District
of Uttar Pradesh

By

Samiksha Sharma

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

Academic year, 2017-2019



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TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Samiksha Sharma** student of MBA Health and Hospital Management from The IIHMR University, Jaipur has undergone internship training at **Piramal Foundation** from **1st February 2019 to 8th May, 2019.**

The Candidate has successfully carried out the study on '**Low IFA tablet consumption among pregnant and lactating women**' designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.



(Col) Dr. Ashok Kaushik
Dean, Academic and Student Affairs
The IIHMR University, Jaipur



Dr. Seema Mehta
Professor, Guide
The IIHMR University, Jaipur



The certificate is awarded to

Dr. SAMIKSHA SHARMA

In recognition of having successfully completed her

Internship in the department of

OPERATIONS

and has successfully completed her Project on

**ASSESSING THE REASONS FOR LOW IFA TABLET CONSUMPTION AMONG PREGNANT AND
LACTATING WOMEN OF BAHRAICH DISTRICT OF UTTAR PRADESH.**

Date: May 08, 2019

Organization: Piramal Foundation

She comes across as a committed, sincere & diligent person who has a strong drive
and zeal for learning

We wish her all the best for future endeavors

A handwritten signature in blue ink, appearing to be 'S. Singh'.

Training & Development

General Manager - Human Resources

THE IIMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled ... Assessing reasons for low IFA tablet consumption among pregnant and lactating women of Bahraich district of Uttar Pradesh and submitted by (Name) ...Dr. Samiksha Sharma...Enrollment No.....0657..... under the supervision ofDr.Seema Mehta..... for award of MBA in Hospital and Health of the University carried out during the period from1-Feb-2019..... to.....8-May-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.

Samiksha

Signature

ABSTRACT

Background; According to NFHS-4(2014-15) in India prevalence of anemia in women of reproductive age group 15-49 years is 53.3 %. In NFHS-3 (2004-05) prevalence of anemia in women of reproductive age group 15-49 years was 55.3%. Though government of India has launched Iron plus initiative to curb menace of iron deficiency anemia (which is most common type of anemia), In past 10 years there is just marginal decline of 2% in prevalence of anemia among women of reproductive age has been recorded. Uttar Pradesh is a state in which IFA tablet consumption is fourth lowest and anemia among women of reproductive age group is 52.4%. This study was conducted to assess reasons for low IFA tablet consumption in Bahraich (an aspirational district) district of Uttar Pradesh.

Research Question: What are the reasons for low IFA Tablet consumption among pregnant and lactating women in Bahraich District of Uttar Pradesh?

Methodology; The study was conducted in Fakharpur block of Bahraich district. It's a cross-sectional study in which a sample size of 100 women were interviewed including both pregnant and lactating women. These women were those who were attending Model VHNDs. i.e. Fakharpur village (n=19) Madhawpur village (n=18) Bamiyari village(n=15) Guntoor village (n=17), Kantausa village (n=14) & Baudi villages(n=17)

These 6 VHNDs were selected randomly from microplanning list of models VHNDs which was available at CHC. In the VHND session researcher spotted the respondents according to exclusion and inclusion criterion and conducted the interview.

Key results:

The mean age of this population under study is 22.9 year.

It's a Muslim majority population where 69 out of 100 respondents were Muslim and 31 out of 100 respondents were Hindus. As per the educational status most of the women i.e. 36% women knew how to read and write. Muslim households were spending more compared to Hindus. Because of bigger family sizes. On cross tabulation a clear trend can be observed as level of education is directly proportional to number of users. As level of education increased, number of users also increased. Out of total 28 illiterate women only 6 were consuming IFA tablet. On performing Pearson's chi-square test value of p is less than 0.05, hence there is a significant association between educational level of respondent and IFA tablet consumption.

Majority of the respondents didn't know what anemia is (n=100. 68=no, 32=yes). Out of 32 respondents who knew what anemia 24 respondents is knew the symptoms of anemia. On probing it further it was found out that 68 out of 100 women didn't knew about advantages of taking IFA tablets during pregnancy and lactation. Only 32 women had knowledge about advantages of taking IFA tablets. Those who were educated had better knowledge about advantages of IFA tablets.

Conclusion: It can be observed that lack of education and lack of counselling by health workers has led to low level of awareness about IFA tablets. Hence consumption of IFA tablets in sample population is extremely low.

Even though there was no shortage of IFA tablets and their supply at all the 6 Model VHND sessions.

Thus, improving counselling by AAA would be of great help to increase IFA tablet consumption and reduce anemia.

On the other hand, out of 34 women who received education till primary school 28 were consuming IFA tablets.

The main reason behind this is during VHND sessions the focus of AAA (Agnawari worker, ASHA & ANM) are pregnant women and children. On cross tabulation a clear trend can be observed as level of education is directly proportional to number of users. As level of education increased, number of users also increased. Out of total 28 illiterate women only 6 were consuming IFA tablet. On the other hand, out of 34 women who received education till primary school 28 were consuming IFA tablets.

On performing Pearson's chi-square test value of p is less than 0.05, hence there is association between educational level of respondent and IFA tablet consumption. Majority of the respondents didn't know what anemia is (n=100. 68=no, 32=yes) or what are symptoms of anemia (N=32, 8=no, 24=yes). It clearly reflects lack of counselling.

Conclusion; It can be observed that lack of education and lack of counselling by health workers has led to low level of awareness about IFA tablets. Hence consumption of IFA tablets in sample population is extremely low. Even though there was no shortage of IFA tablets and their supply at Model VHND sessions. Thus, improving counselling by AAA would be of great help to increase IFA consumption and reduce anemia.

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Dr. Samiksha Sharma
MBA-HM-22
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TABLE OF CONTENT

1.1 Introduction.....	Page no
1.2 Literature review.....	Page no
1.3 Methodology.....	Page no
1.4 Results.....	Page no
1.5 Discussion.....	Page no
1.6 Conclusion.....	Page no

LIST OF FIGURES

Serial number	Figure number	Title of figure
1	Figure 1	Continuum of care according to RMNCHA+
2	Figure 2	Figure depicts improvement in level of anemia prevalence in India. According to NFHS-3 Anemia in All women in age group of 15-49 year was 57.9% and in NFHS-4 it was 50.4
3	Figure 3	Following map shows prevalence of anemia in All women (15-49 years of age) India according to NFHS-4 data. The map was created using Advanced excel Map tool by the researcher
4	Figure 4	IFA tablet consumption in Mothers who consumed iron folic acid for 100 days or more during pregnancy. The map was created using advanced excel Map tool by the researcher
5	Figure 5	Following figure is showing religious distribution of the sample population
6	Figure 6 Figure 6.1 Figure 6.2	frequency distribution of respondent's knowledge about advantages of IFA tablets frequency distribution showing knowledge of respondents about anemia frequency distribution showing respondents knowledge about symptoms of anemia
7	Figure 7	Likert's scale reflecting women response to " how serious anemia could be during pregnancy"
8	Figure 8	Likert's scale reflecting response of women for "how likely it is that they will become anemic if they do not consume IFA tablets during pregnancy

LIST OF TABLES

Serial number	Table number	Title of the table
	Table 1	According to NFHS-4 this is the list of top 20 states with highest prevalence of anemia in women of reproductive age 15-49 years.
	Table 2	the following table represents states in increasing order of IFA tablet consumption for 100 or more days during pregnancy according to NFHS-4 (2014-15)
	Table 3	Mean age of the sample population
	Table 4	Educational status of the sample population
	Table 5	average household expenditure per day
	Table 6	Frequency distribution of Pregnant and lactating women
	Table 7	Frequency distribution of doer and non-doer
	Table 8	cross tabulation between <i>frequent user - non-frequent users</i> and pregnant – lactating women
	Table 9	crosstabulation between <i>user & non-users</i> and educational status
	Table 10	Cross tabulation between <i>user & non-users</i> and income of respondent
	Table 11	Number women who were counselled by AAA (Anganwari worker, ASHA & ANM about IFA tablets

LIST OF ABBREVIATIONS

ANC.....	Ante Natal Care
ANM.....	Auxiliary Nurse Midwife
ASHA.....	Accredited Social Health Activist
AWC.....	Anganwadi center
AWW.....	Anganwadi Worker
AYUSH.....	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
BCC.....	Behavior Change Communication
BF.....	Blood Film
DPMU.....	District Programme Management Unit
DPT.....	Diphtheria Pertussis and Tetanus
ECP.....	Emergency Contraception Pills
ENBC.....	Essential Newborn Care
GOI.....	Government of India
HIV.....	Human Immunodeficiency Virus
IEC.....	Information, Education and Communication
IFA.....	Iron Folic Acid
JSY.....	Janani Suraksha Yojna
LHV.....	Lady Health Visitor
MCH.....	Mother and Child Health
MO.....	Medical Officer
MP.....	Malarial Parasite
MPW.....	Multi-Purpose Worker
MTP.....	Medical Termination of Pregnancy
NRHM.....	National Rural Health Mission
OCP.....	Oral Contraceptive Pills
OPV.....	Oral Polio Vaccine
ORS.....	Oral Rehydration Salt

PHC.....	Primary Health Centre
PPTCT.....	Prevention of Parent-to-Child Transmission
PRI	Panchayati Raj Institution
RCH II.....	Reproductive and Child Health Programme-Phase II
RMP	Rural/Registered Medical Practitioner
RTI	Reproductive Tract Infections
SC.....	Scheduled Castes
ST	Scheduled Tribes
STI	Sexual Tract Infections
TB.....	Tuberculosis
TBA.....	Traditional Birth Attendant
UNFPA.....	United Nations Population Fund
VCTC.....	Voluntary Counselling and Testing Centre
VHND	Village Health Nutrition Day
VHSC	Village Health and Sanitation Committee
VVM	Vaccine Vial Monitor

Chapter 1 INTRODUCTION

Anemia is defined as low hemoglobin concentration. Most common type of anemia is iron deficiency anemia. It can have extremely adverse effect on pregnant and lactating women. Among pregnant women anemia could lead to maternal, per-natal mortality and low birth weight.(1). Burden of anemia is a public health problem for government of India. According to NFHS-4 57.9 % of women are (2) anemic. (2) The government of India has started many initiatives to combat anemia one of such initiatives is National Iron Plus initiative (3). This program will bring together existing programs (IFA supplementation for; Pregnant and lactating women, children in age group of 6-60 months and introduced a new age group). The main goal of this plan was to reduce iron deficiency anemia in girls and women by 50 %. Following four age groups were identified;

- Pre-school children of 6-59 months
- Children of age group 6-10 years
- Adolescent of age group 10-19 years
- Women in reproductive age group, Pregnant and lactating women. (3)

Out of all these 4 sections pregnant and lactating women are most vulnerable group. Adolescence and pregnancy forms foundation of continuum of care. Half of the health indicators of nation can be improved if one focus on second stage of continuum of care i.e. pregnancy/

Figure 1 Continuum of care according to RMNCHA+



Despite all these efforts pregnant women who are anemic in age group of 15-49 years is 53.3% according to NFHS-4 (2014-15). Though the number of pregnant women in age group 15-49 years has declined by 2%. NFHS-3(2004-05) reported that 55.3% of pregnant women in age

group of 15-49 years are anemic in India. The decline in prevalence of anemia is marginal considering the number of schemes launched by Govt of India.

Figure 2: The following figure depicts improvement in level of anemia prevalence in India. According to NFHS-3 Anemia in All women in age group of 15-49 year was 57.9% and in NFHS-4 it was 50.4

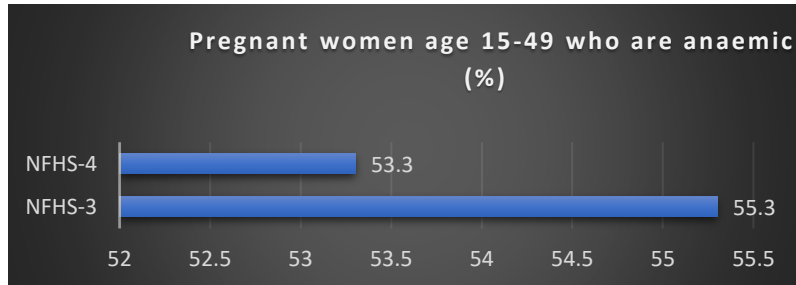
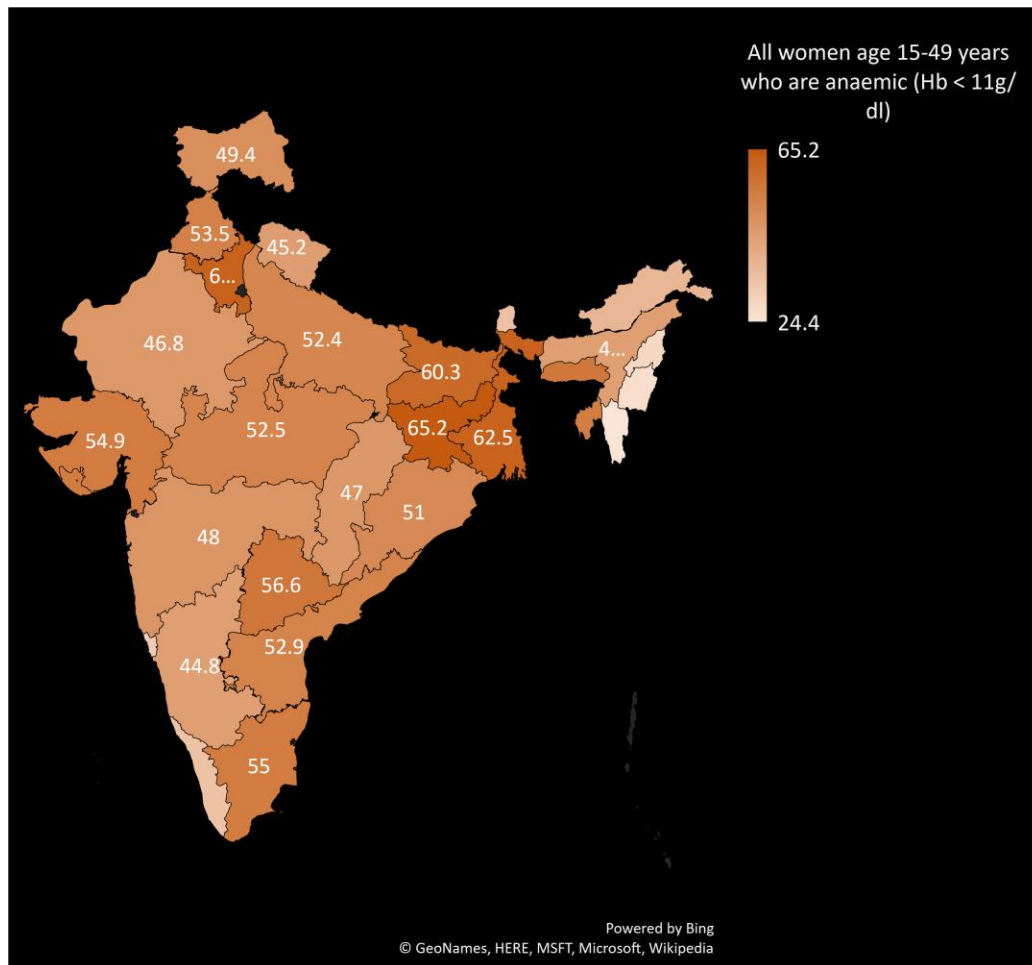


Figure 3: Following map shows prevalence of anemia in All women (15-49 years of age) India according to NFHS-4 data. The map was created using excel Map tool by the researcher



As it can be seen in the figure 2 that Uttar Pradesh is one of the top 20 high anemia prevalence state. Anemia prevalence in all women of 15-49 year of age is 52.4%. Anemia prevalence in pregnant women of age group 15-49 year is 51.2 % & anemia prevalence in non-pregnant women is 52.5% Which a little higher than the national average.

Table 1: According to NFHS-4 this is the list of top 20 states with highest prevalence of anemia in women of reproductive age 15-49 years.

State	All women age 15-49 years who are anaemic (Hb < 11g/dl)
Jharkhand	65.2
Haryana	62.7
West Bengal	62.5
Bihar	60.3
Telangana	56.6
Meghalaya	56.2
Tamil Nadu	55
Gujarat	54.9
Tripura	54.5
Himachal Pradesh	53.5
Punjab	53.5
Andhra Pradesh	52.9
Madhya Pradesh	52.5
Uttar Pradesh	52.4
Odisha	51
Jammu and Kashmir	49.4
Maharashtra	48
Chhattisgarh	47
Rajasthan	46.8
Uttarakhand	45.2

Consumption of iron folic acid during pregnancy is indirectly proportional to prevalence of anemia among pregnant women. In other words, we can say consumption of iron folic acid directly affects maternal mortality & prenatal mortality. But unfortunately, despite implementation of Iron plus initiative in India consumption of IFA tablet is considerably low. Following map shows state wise IFA tablet consumption in India among pregnant women according to NFHS-4 (2014-15). Uttar Pradesh is one the states with lowest IFA tablet consumption during pregnancy. In fact, it is among top 5 states with lowest IFA table consumption during pregnancy for 100 or more days.

Figure 4: IFA tablet consumption in Mothers who consumed iron folic acid for 100 days or more during pregnancy. The map was created by the researcher using advanced excel map tool.

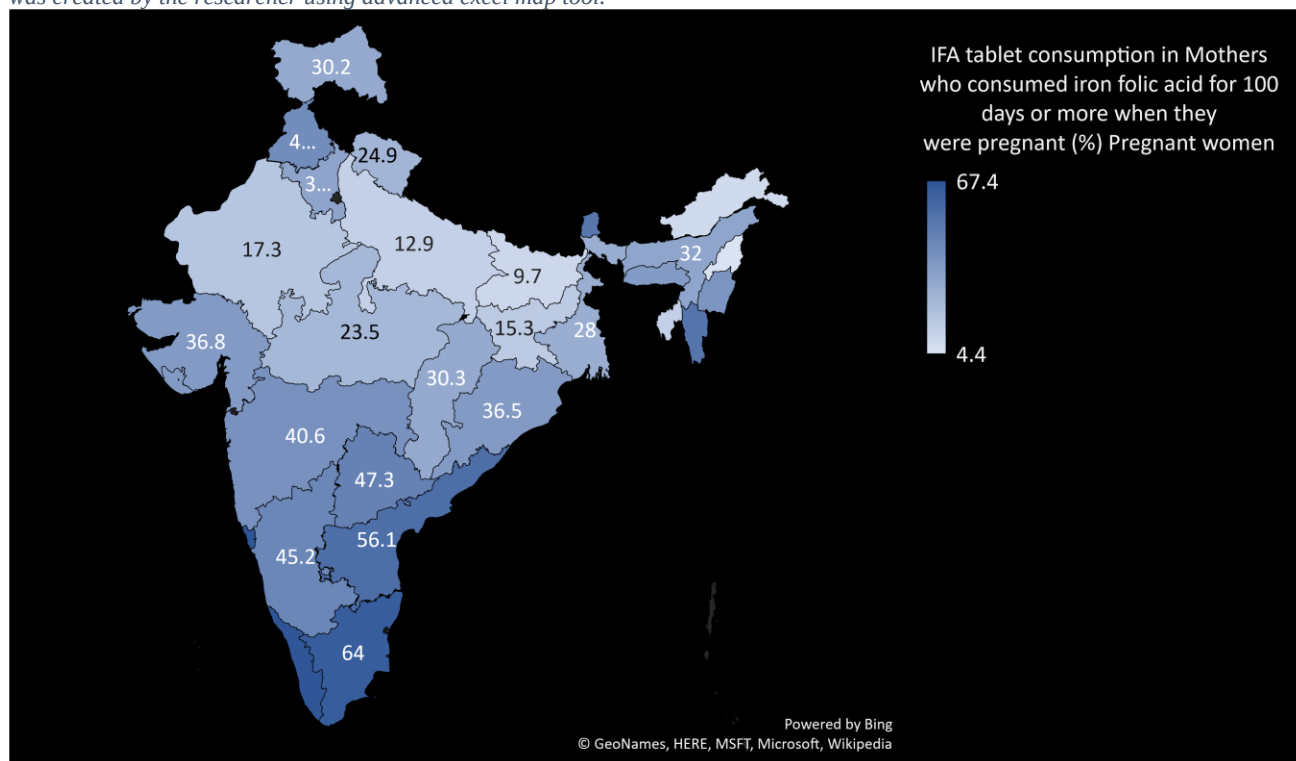


Table 2 the following table represents states in increasing order of IFA tablet consumption for 100 or more days during pregnancy according to NFHS-4 (2014-15)

State	IFA tablet consumption in Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%) Pregnant women
Nagaland	4.4
Arunachal Pradesh	8.3
Bihar	9.7
Uttar Pradesh	12.9
Tripura	13.4
Jharkhand	15.3
Rajasthan	17.3
Madhya Pradesh	23.5
Uttarakhand	24.9
West Bengal	28
Jammu and Kashmir	30.2
Chhattisgarh	30.3
Assam	32
Haryana	32.5
Meghalaya	36.2
Odisha	36.5
Gujarat	36.8
Manipur	39.2
Maharashtra	40.6
Punjab	42.6

At district level Bahraich district of Uttar Pradesh have 5.3% IFA tablet consumption for 100 or more days during pregnancy. This is even less than half of IFA tablet consumption for 100 or more during pregnancy for Uttar Pradesh (which is 12.9%).

Bahraich has been identified by NITI Ayoga as one of the aspirational districts. Government of India has launched Transformation of Aspirational Districts' programme quickly and effectively transform these districts. The broad contours of the programme are Convergence (of Central & State Schemes), Collaboration (of Central, State level 'Prabhari' Officers & District Collectors), and Competition among districts driven by a mass Movement. With States as the main drivers, this program will focus on the strength of each district, identify low-hanging fruits for immediate improvement, measure progress, and rank districts. Government of India has identified 8 aspirational districts in Uttar Pradesh.

1. Bahraich,
2. Balrampur,
3. Shrawasti,
4. Chitrakoot,
5. Sonbhadra
6. Chandauli,
7. Siddharthnagar and
8. Fatehpur

Out of these first 5 districts has been allotted to Piramal foundation. Piramal foundation has implemented Model VHND in these 5 districts to improve health indicators.

The main objective of this study is to ascertain reasons for low IFA tablet consumption in Pregnant and lactating women in Bahraich district of Uttar Pradesh. Specifically, it was aimed to explore if women receive IFA, and if they receive but do not take it, why they do not take it. The researcher also wanted to explore if women receive counselling regarding iron rich food and advantages of IFA tablets. This study helped in assessing awareness and improving IFA tablet distribution in the specific population group studied. In a nut shell:

- ▶ To assess reasons for low IFA Tablet consumption.
- ▶ To assess awareness among pregnant and lactating women about advantages, disadvantages & taboos related to IFA tablets.
- ▶ To assess level of counselling received by pregnant and lactating women regarding IFA tablets.

Chapter 2 LIETRATURE REVIEW

Author (year)	Study location	Sample size	Sampling technique	Salient features
Varghese JS, Swaminathan S, Kurpad AV, Thomas T 2019	Sirohi district of Rajasthan	436- Pregnant women 168-health care worker	A multi-stage cluster sampling of Primary Sampling Units (PSU) which were villages (for rural areas) and wards (for urban areas) as per the Census of India [25] was employed. The sampling was stratified by block, rural-urban status and the PSUs were selected by probability proportional to size sampling.	This study analyzed supply and demand of IFA tablets. It was found that consumption of IFA tablets is inversely proportional to anemia during third trimester of pregnancy.
Dilaram Acharya 1 , Jitendra Kumar Singh 2 , Rajendra Kadel 3 , Seok-Ju Yoo 1 , Ji-Hyuk Park 1 and Kwan Lee 1,* 2018	Rural Nepal	436 pregnant women in second trimester	Randomized cluster sapling. Pregnant women aged 15–49 years, in their second trimester (13–28 weeks of gestation), from fifty-two clusters (wards) of six village development committees (VDCs), from the Dhanusha district, were selected for the MATRI-SUMAN trial, using multistage cluster sampling method	This study was undertaken to examine the association between LBW and maternal factors and antenatal care service utilization, in rural Nepal, using data obtained for a capacity-building and text-messaging intervention, designed to enhance maternal and child health service utilization among pregnant women, in rural Nepal (“MATRI-SUMAN”). It was found that a wide range of maternal factors, that is, the Dalit caste/ethnicity, illiteracy, occupation as a manual laborer, having four or more family members, and birth of a female child were significantly positively associated with an LBW, and that those with a kitchen garden and those who resided in the intervention area of the MATRI-

				SUMAN trial area were less likely to have LBW babies. In addition, lack of utilization of antenatal care services (as indicated by no ANC visit), fewer than four ANC visits, not consuming the recommended doses of IFA and de-worming tablets, and not consuming additional food during pregnancy, increased the risk of an LBW baby.
Elizabeth L. Prado ¹ Ulla Ashorn ² John Phuka ³ 2017	Malawi	869 Pregnant women	Randomized control trial.	Aim of the study was to assess (a) differences in maternal cognition and caregiving between women in Malawi who received different nutritional supplements, (b) 14 effect modifiers, and (c) associations of cognition and caregiving with biomarkers of iron, Vitamin A, B-vitamin, and fatty acid status. In a randomized controlled trial (n = 869), pregnant women daily received either multiple micronutrients (MMN), 20 g/day lipid-based nutrient supplements (LNS), or a control iron/folic acid (IFA) tablet. In the full group of participants assessed for cognition, women who received IFA scored 0.22 SD higher than those who received LNS in visuospatial ability, equivalent to 3 IQ points. However, for verbal working memory and executive function, we found several significant effect modifiers showing a pattern of higher scores in the LNS arm

				compared to the IFA arm in certain subgroups. Among women with low Hb, poor iron status, or malaria at enrollment, those who received LNS scored 0.4 to 0.7 SD higher than those in the IFA arm in verbal
Tanica Lyngdoh ^{1,4*} , Sutapa B. Neogi ¹ , Danish Ahmad ² , Srinivasan Soundararajan ² and Dileep Mavalankar 2018	Uttar Pradesh	2208 currently married women	Multi-stage cluster sampling	In this paper, set out to examine the effect of intensity of contact with FLWs on key maternal and newborn health behaviors and to determine if this association varies by status of Self Help Group (SHG) membership. Methods: This population-based cross-sectional study included 2208 currently married women aged 15–49 years This study found out that. There was an overall low prevalence of both knowledge and practice of key maternal and newborn healthy behaviors and only a few of these were associated with frequency of contacts with FLW. Findings not only highlight the urgent need for effectively leveraging FLWs to strengthen maternal and newborn care but also to improve the quality of services provided by them
Raghunathan K1, Chakrabarti S1, Avula R1, Kim SS2	Odisha	1161 household	From each district, four blocks randomly selected (n = 12) and 25 villages (n = 300) from each block. Four households (two with	In this study one conditional cash transfer program, Mamata scheme, implemented in the state of Odisha, in India that targeted pregnant and lactating women. Using survey data on 1161

2017			children 0–5.9 months of age and two with children 6.0–23.9 months of age) were selected randomly from the list of households at the Anganwadi Centre (AWC) in each village. Respondents were mothers of these children from the selected households.	households from three districts in the state of Odisha, we examine the effect of the scheme on eight outcomes: 1) pregnancy registration; 2) receipt of antenatal services; 3) receipt of iron and folic acid (IFA) tablets; 4) exposure to counseling during pregnancy; 5) exposure to postnatal counseling; 6) exclusive breastfeeding; 7) full immunization; and 8) household food security This paper provides the first quantitative estimates of the impact of the Mamata maternity benefit scheme on exposure to nutrition interventions and household food security in Odisha. It shows that the scheme had positive and significant effects on food security, registration of the pregnancy and receipt of ANC and of IFA tablets from government frontline health workers.
Diamond-Smith NG1, Gupta M2, Kaur M2, Kumar R	Chandigarh	120 pregnant women	Three focus group discussions with pregnant women from different socioeconomic groups and 2 with female health workers were conducted to explore their perceptions and	This study explores the determinants of persistent anemia in poor pregnant women in an urban population in Chandigarh, India Sixty-five percent of respondents had hemoglobin less than 11g/dL

2016			beliefs about maternal anemia and iron folic acid (IFA) tablets in urban settings. This was followed by interviews of 120 pregnant women	and were anemic. Only 35% respondents obtained free IFA through public health programs. While 53% of respondents knew that they should eat green leafy vegetables, only 8% reported daily consumption of these vegetables. Focus group discussions highlighted issues around lack of food, especially for slum women, and low decision-making power in the household. Stock-outs of IFA in facilities often pushed women to purchase IFA from chemist shops. Clear gaps emerged in pregnant women's knowledge and practice regarding diet and IFA tablet use. Lack of control over decision-making due to their low status of women was also hindering IFA use and healthy eating.
Harding KL1, Matias SL1, Mridha MK1,2, 2017	Bangladesh	Pregnant and lactating women-360	A random subsample of women (n = 360) during pregnancy, early (6- to 12-week post-partum) and late (12- to 24-week post-partum) lactation, from an ongoing effectiveness trial in Bangladesh, was selected	This study explores Limited knowledge on sustained adherence to small-quantity lipid-based nutrient supplements for pregnant and lactating women (LNS-PL) and how this compares with that of other prenatal supplements. To address these gaps, a random subsample of women (n = 360) during pregnancy, early (6- to 12-week post-partum) and late (12- to 24-week post-partum) lactation, from an ongoing effectiveness trial in Bangladesh, was selected for in-home interviews about LNS-PL or iron/folic acid (IFA) use and preferences.

Phuong H. Nguyen ^{1 *} , Tina Sanghvi ² , Sunny S. Kim ¹ , Lan M. Tran ² , Kaosar Afsana ³ , Zeba Mahmud ² , Bachera Aktar ³ , Purnima Menon ¹ 2017	Dhaka , Bangladesh			This paper examines the maternal, household, and health service factors influencing maternal nutrition practices in the context of a large scale maternal, newborn, and child health (MNCH) program in Bangladesh. D
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Chapter 3 METHODOLOGY

Research question; To assess reasons for low IFA tablet consumption among pregnant and lactating women of Bahraich District of Uttar Pradesh.

Research design; Analytical, Cross-sectional

Sampling technique; Convenient sampling

Study setting

The study was conducted in Fakharpur block of Bahraich district. It's a cross-sectional study in which a sample size of 100 women were interviewed including both pregnant and lactating women. These women were those who were attending Model VHNDs. i.e. Fakharpur village (n=19) Madhawpur village (n=18) Bamiyari village(n=15) Guntoor village (n=17), Kantausa village (n=14) & Baudi villages(n=17)

These 6 VHNDs were selected randomly from microplanning list of models VHNDs which was available at CHC. In the VHND session researcher spotted the respondents according to exclusion and inclusion criterion and conducted the interview.

VHND (village health and nutrition day) was concept developed by Integrated nutrition and health project. It is a major initiative under National Rural health mission (NRHM) to improve maternal, newborn, child and nutrition services at village level. As per the guidelines, VHND need to be organized once every month (preferably on Wednesdays and for those villages that have been left out, on any other day of the same month) at the Anganwadi centers (AWCs) in the village to ensure uniformity in organizing the VHND. The AWCs were identified as the hub for service provision in primary health care services as a platform for intersectoral convergence as interface between the community and the health system. VHND Guidelines suggested provision of package of services including registration of pregnant women and vaccination for all eligible children especially focusing on drop out cases of pregnant women and children, growth monitoring and appropriate management of malnourished children, family planning services, and health education among others. Piramal foundation has adopted Model VHND as their key intervention where they

conduct VHND strictly aligned with government of India guidelines for VHND. Sample size was chosen from model VHND only to make sure supply of IFA tablet was uninterrupted.

A structured questionnaire with both open ended and close ended questions was used to collect the data from these 6 different model VHND sessions

Inclusion criterion; Pregnant women attending their 2nd, 3rd and 4th ANC checkup.

Lactating women with child in age group of 0-6 months.

Exclusion criterion; Pregnant women attending their 1st ANC checkup

Lactating women with child above 6 months of age.

Ethical consideration

All the respondents were explained properly that this study is being conducted to assess awareness related to IFA tablet consumption. Proper consent was taken before conducting interview of the respondent for the project. An elaborate explanation was given regarding risk and benefits associated with the interviews. Permission of AAA was obtained before conducting interviews to make sure normal proceedings of model VHND are not hampered.

Data Analysis

The data was entered using Microsoft excel. The data was analyzed using SPSS. The researcher has used mean, frequency, cross tabulation and chi-square to analyze the data.

Chapter 4 RESULTS

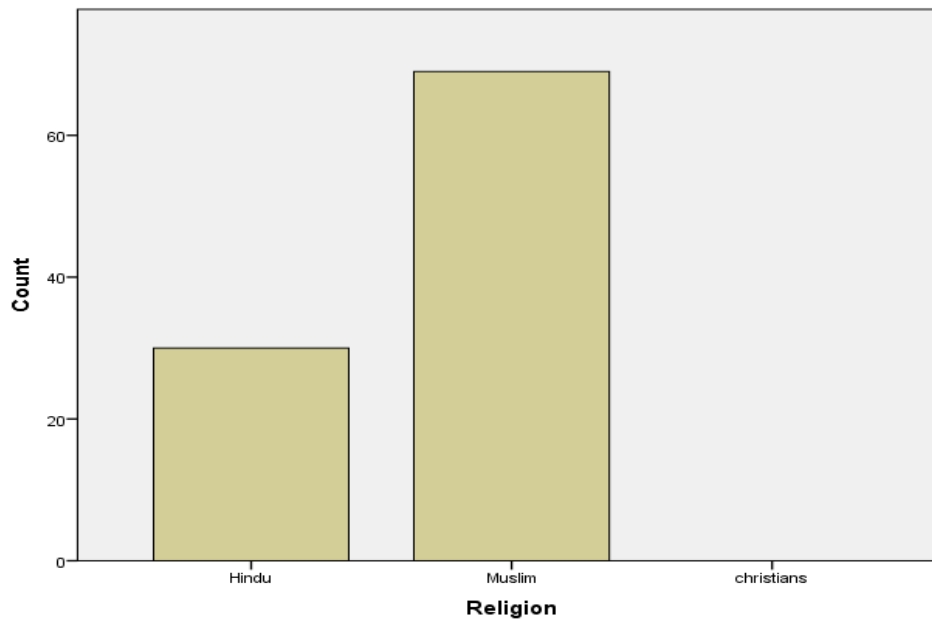
Demographic characteristics of sample population

- The mean age of this population under study is 22.9 year. It's a Muslim majority population where 69 out of 100 respondents were Muslim and 31 out of 100 respondents were Hindus.

Table 3 Mean age of the sample population

Mean	N	Std. Deviation
22.99	99	4.019

Figure 5: Following figure is showing religious distribution of the sample population



- As per the educational status most of the women i.e. 36% women knew how to read and write. 28% women in sample population were illiterate. 34% attended school up to primary. The basic education profile of this sample shows majority 64 % (28%+36%) women never attended school or neither they have any formal education.

Table 4; Educational status of the sample population

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1.0	1.0	1.0
illiterate	28	28.3	28.3	29.3
can read and write	36	36.4	36.4	65.7
primary school	34	34.3	34.3	100.0
Total	99	100.0	100.0	

- Average Per day expenditure on basic amenities such as groceries, milk, vegetables etc. was of 250-300 per day for 45% of population. From which we can drive that minimum household income for 45% of sample population was 9000 INR per month.

Table 5 average household expenditure per day

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2.0	2.0	2.0
<150 per dime	32	32.3	32.3	34.3
250-350 per dime	45	45.5	45.5	79.8
>350 per dime	20	20.2	20.2	100.0
Total	100	100.0	100.0	

religion * income of household Crosstabulation

Table 5.1 distribution of house hold income according to religion.

		income of household					
			1	<150	250-350	>350	Total
religion	hindu	0	0	9	16	5	30
	muslim	2	1	22	29	15	69
		0	0	0	0	0	1
Total		2	1	31	45	20	100

- All women(n=100) who were interviewed for this study, out of 100 respondents 53 were pregnant which were in their either 2nd or 3rd trimester. 46 respondents were lactating women with children in age group of 0-6 months.

Table 6 Frequency distribution of Pregnant and lactating women

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	pregnant	53	53.5	53.5	53.5
	lactating	46	46.5	46.5	100.0
Total		99	100.0	100.0	

Trends noticed during data analysis

- Some of the respondents were marked as *frequent user* and some were marked as *non-frequent users*. All those who have taken more than 9 or fewer tablets in past 15 days were marked as *non-frequent users* by the researcher and all those who taken 10 or more tablets in past 15 days were marked as *frequent user*. Table 7 shows that out of 100 respondents 48 were *frequent user* (took 10 or more IFA tablets in past 15 days) & 51 were *non-frequent users* (took 9 or fewer than 9 IFA tablets in past 15 days).

Table 7 Frequency distribution of frequent user and non-frequent users

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	doer	48	48.5	48.5	48.5
	non-doer	52	52.5	52.5	100.0
	Total	100	100.0	100.0	

- Table 8 shows that among **user's** majority was of pregnant women i.e. 44 out of 48, among *non-frequent users* majority was of lactating women. The main reason behind this is during VHND sessions the focus of AAA (Agnawari worker, ASHA & ANM) are pregnant women and children. AAA (Agnawari worker, ASHA & ANM) focus on pregnant women because they get better incentives when a woman completes 4 ANC's. Children are focus area because of universal immunization programs. But lactating mothers are neglected. Hence most of lactating women are not given IFA tablets on VHND day, even though there was no shortage of supply of IFA on VHNDs.

Table 8 cross tabulation between "frequent users & non-frequent users" and pregnant – lactating women

		Are you currently taking IFA tablets		Total
		Frequent users	non-frequent user	
pregnant or lactating	pregnant	44	9	53
	lactating	4	42	46
Total		48	51	99

- A cross tabulation between educational status and user and non-users

Table 9 Crosstabulation between user & non-users and educational status & chi square test

	IFA tablets taking currently		
	yes	no	Total
education status	0	1	1
illiterate	6	22	28
can read and write	14	22	36
primary school	28	6	34
	0		
Total	48	51	100

		IFA tablets taking currently		
		yes	no	Total
education status	Count	0	1	1
	% within IFA tablets taking currently	0.0%	2.0%	1.0%
	illiterate Count	6	22	28
	% within IFA tablets taking currently	12.5%	43.1%	28.0%
can read and write	Count	14	22	36
	% within IFA tablets taking currently	29.2%	43.1%	36.0%
primary school	Count	28	6	34
	% within IFA tablets taking currently	58.3%	11.8%	34.0%
Total		48	51	100
		100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	174.330 ^a	4	.000
Likelihood Ratio	61.960	4	.000
N of Valid Cases	100		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .01.

On cross tabulation a clear trend can be observed as level of education is directly proportional to number of users. As level of education increased, number of users also increased. Out of total 28 illiterate women only 6 were consuming IFA tablet. On the other hand, out of 34 women who received education till primary school 28 were consuming IFA tablets.

On performing Pearson's chi-square test value of p is less than 0.05, hence there is association between educational level of respondent and IFA tablet consumption.

Table 10 crosstabulation between user& non-user and income of respondent

		IFA tablets taking currently			Total
		yes	no	Q.2Show respondent IFA tablets. In the past have you taken any Iron Folic Acid Tablets 1=yes.2= no	
income of		1	1	0	2
household	1	0	1	0	1
	<150	0	31	0	31
	250-350	29	16	0	45
	>350	18	2	0	20
	Income f Respondent/ household expenditure per day	0	0	1	1
Total		48	51	1	100

It can be observed that as income level of respondents increased number of IFA consumer also increased. 18 out of 20 respondents who had an income of >350 INR per day were consuming

IFA tablets. 29 out of 45 respondent who had an income of 250-350 per day were consuming IFA tablets. Those who had income less than 150 INR per day none of them were consuming IFA tablets

- .On probing it further it was found out that 68 out of 100 women didn't knew about advantages of taking IFA tablets during pregnancy and lactation. Only 32 women had knowledge about advantages of taking IFA tablets.

FIGURE 6

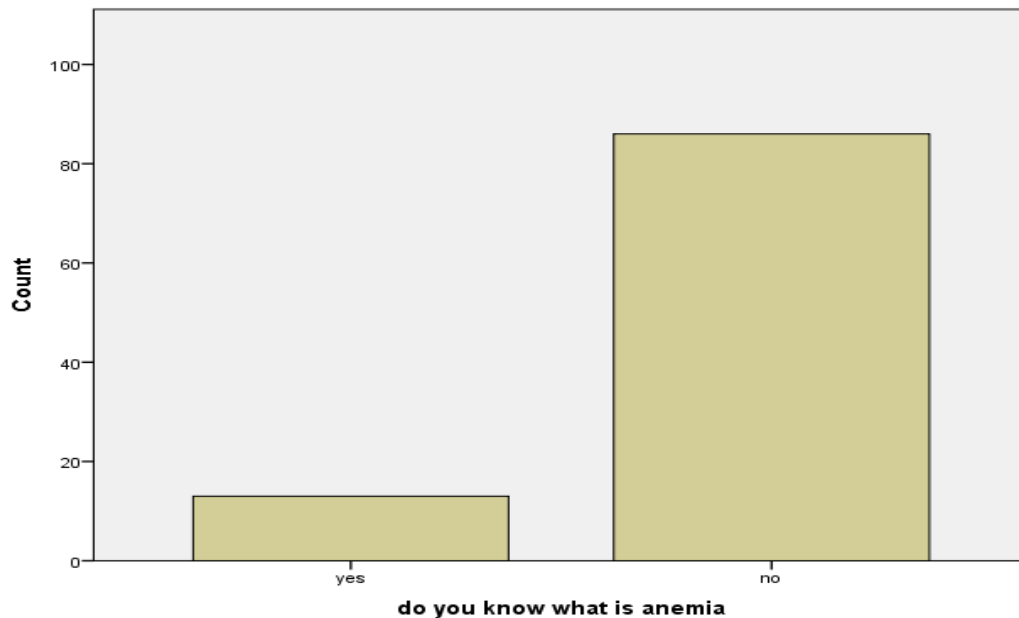
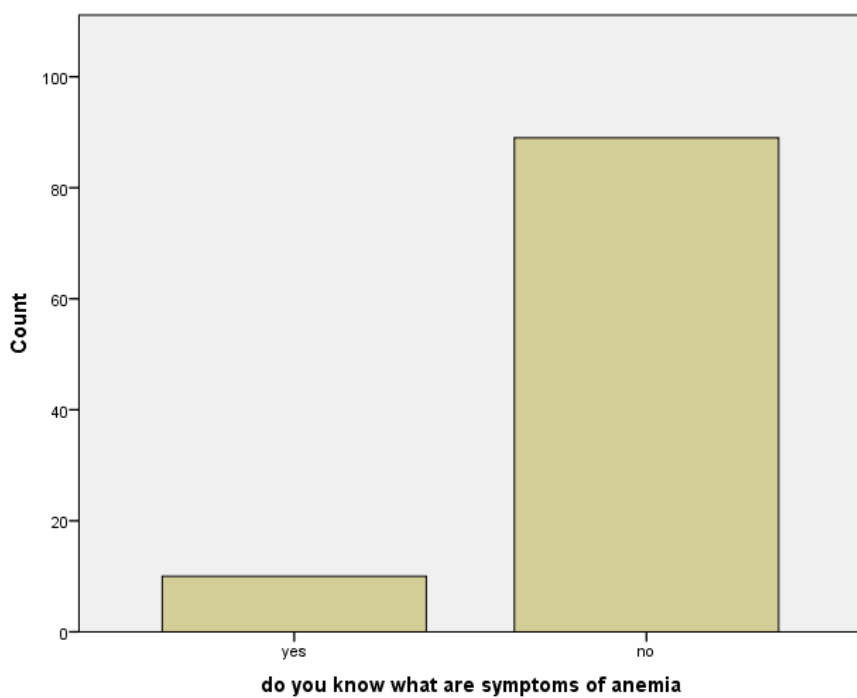
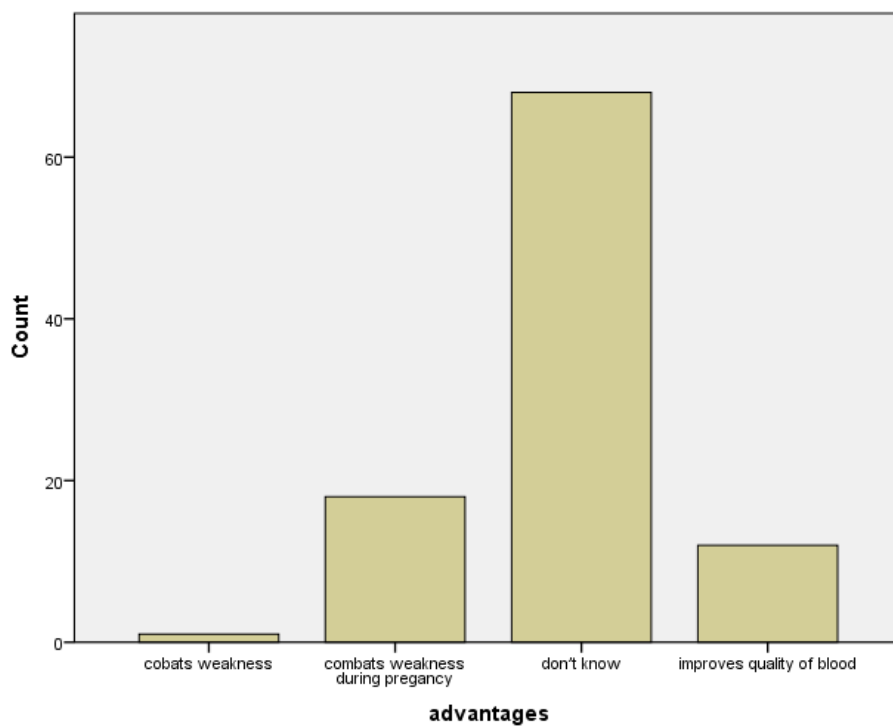


FIGURE 7



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Figure 8 frequency Distribution of respondent's knowledge about advantages of IFA tablets



education status * advantages of taking IFA Crosstabulation

Table 11 cross between knowledge about advantage and education level

		advantages of taking IFA					Total
			combats weakness	combats during pregnancy	don't know	improves quality of blood	
education		0	0	0	1	0	1
status	illiterate	0	0	1	27	0	28
	can read and write	0	0	5	27	4	36
	primary school	0	1	12	13	8	34
	Q.3.Educational Status	1	0	0	0	0	1
Total		1	1	18	68	12	100

Majority of the respondents didn't know what anemia is (n=100. 68=no, 32=yes) or what are symptoms of anemia (N=32, 8=no,24=yes). It clearly reflects lack of counselling.

- Only 17 out of 100 women were counselled about IFA tablets by AAA at VHND day. Rest 82 were never counselled by AAA (Aganwari worker, ASHA & ANM) regarding benefits of IFA tablets. During the study it was also found that no myths or beliefs were associated with consumption of IFA tablets as none of the 100 respondents reported any religious taboo associated with the IFA tablet consumption or anyone approving or disapproving. Only 4 out of 100 reported that their mother or mother in law encouraged them to take IFA tablet.

Table 11 Number women who were counselled by AAA (Aganwari worker, ASHA & ANM about IFA tablets

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	17	17.2	17.2	17.2
no	82	82.8	82.8	100.0
Total	99	100.0	100.0	

DISCUSSION

The sample population had a mean age of 22.9 years. Muslims were religious majority, Majority of the women just knew how to “read and write”. During the analysis it was found that most of the *frequent user* were pregnant women. Lactating women were mostly *non-frequent users*

Only 17 women were counselled by health workers about IFA tablets. On cross tabulation a clear trend can be observed as level of education is directly proportional to number of users. As level of education increased, number of users also increased. Out of total 28 illiterate women only 6 were consuming IFA tablet. On the other hand, out of 34 women who received education till primary school 28 were consuming IFA tablets.

On performing Pearson’s chi-square test value of p is less than 0.05, hence there is association between educational level of respondent and IFA tablet consumption. Majority of the respondents didn’t know what anemia is (n=100. 68=no, 32=yes) or what are symptoms of anemia (N=32, 8=no,24=yes). It clearly reflects lack of counselling.

CONCLUSION

It can be observed that lack of education and lack of counselling by health workers has led to low level of awareness about IFA tablets. Hence consumption of IFA tablets in sample population is extremely low. Even though there was no shortage of IFA tablets and their supply at Model VHND sessions. Thus, improving counselling by AAA would be of great help to increase IFA consumption and reduce anemia.

SUGESSTIONS

1. Health workers should counsel both pregnant and lactating women about advantages, disadvantages of IFA tablets and grave consequences of anemia during pregnancy
2. AAA focus mostly on pregnant women and immunization of children during VHND, but they should also focus on Lactating women. As it would decrease the burden of anemia.
3. Usually ANM are responsible for immunization and ANC checkups which require certain set of soft skills. So, responsibility of counselling should be allotted to Anganwari workers or ASHA workers to distribute work load equally among all.