

**“ANEMIA PREVENTION IN PREGNANT AND ADOLESCENT
GIRLS THROUGH THE USE OF IRON UTENSILS AND
PROMOTION OF KITCHEN GARDEN”**



IMPLEMENTATION OF PROJECT IN BAYAD 1& 2 BLOCK

DISTRICT: - ARAVALLI

STATE: - GUJARAT

Date : - 01/08/2021 TO 31/01/2022

Prof. Dr. Piyush Sinh,

Dep. Of Food and Nutrition, Home Science,
Shri S.K.Shah & Shrikrishna O.M. Arts College, Modasa. Dist. Aravalli.(Gujarat)

INTRODUCTION

Pregnant and adolescent girls are most vulnerable group for most common nutrition deficiency disorder that is iron deficiency anemia. In India prevalence of anemia ranges from 33% to 89% among pregnant women and is more than 60% among adolescent girls. More than half (53.1 percent) of women (15–49years) in India are anemic, which has long lasting effects on future pregnancies, and is also one of the causes for the high rate of low-birth weight babies. The situation worsens when infants are fed inadequate diets. According to the World Health Organization (WHO), an unbalanced diet and lack of food (other than mother's milk), is directly linked to high rates of stunting, excessive weight, and death in children under five years of age.

Gujarat is one of the developed and leading states of India having largest urban population and facing huge challenges in dealing with malnutrition and anemia. Especially adolescent girls are vulnerable to poor nutritional status, early marriage and childbearing, affecting their ability to live empowered, healthy lives, which in-turn affects the next generation. (NFHS 5) Iron deficiency is caused by poor dietary intake, poor iron and other nutrient intake, poor bioavailability of dietary iron in phytate fiber rich, Indian diet and/or blood loss (for example; hookworm infection, repeated Child birth or heavy menstruation which leads to loss of iron). The main causes of Anemia among girls and women in India are poor diets with low bio available iron combined with worm infestation. Iron supplementation to adolescent girls will improve their mental and physical capacity as well as pre pregnancy hemoglobin status. It will also reduce incidence of low birth weight and maternal mortality. Under National Health Mission, several steps are taken to tackle the situation of anemia like Anemia Mukh Bharat (AMB), Weekly Iron and Folic Acid Supplementation (WIFS) Program me, reporting and tracking system for anemic and severe anemic pregnant women, Iron folic acid supplementation in antenatal and postnatal period, de-warming, providing long lasting insecticides treated bed nets (LLINs), IEC, BCC activities but still 62.6% pregnant women having HB level <11% 3

Integrated Child Development Services (ICDS) scheme is the largest national program me for the mother and child health. The beneficiaries include children below 6 years, pregnant and lactating mothers, and other women in the age group of 15 to 44 years. The package of services provided by the ICDS scheme includes supplementary nutrition, immunization, health check-up, referral services, nutrition and health education, and pre- school education and distribution of iron and folic acid tablets to prevent iron deficiency anemia.

In Gujarat, Hon. Chief Minister recently launched a scheme of Central Government 'Gujarat Poshan Abhiyan 2020-22' to eradicate malnutrition. In which one of the target is reduce the prevalence of

Anemia among Women and Adolescent girls in the age group of 15-49 years with target of reduction by 9% (@ 3% per annum) in next three years.⁴ As a part of this Abhiyan, ICDS department Govt. of Gujarat has one intervention project of providing iron utensils to pregnant women and promotion of kitchen garden at anganwadi center. The introduction of iron pots or improving their use in communities in developing countries for the preparation of food maybe a promising innovative intervention for reducing iron deficiency and iron deficiency anemia.⁵ Community kitchen garden provides fresh chemical free fruits and vegetables to children, pregnant and lactating women.

It can play an important role in enhancing national food security and dietary diversity to combat malnutrition. Fruits and vegetables from the kitchen gardens are good source of micronutrients especially in the poor households. Rural areas have ample space and establishing a kitchen garden is far simpler as farm for families are involved in agriculture. With this background, the present study project is conducted.

AIM AND OBJECTIVES OF THIS PROJECT

AIM:

To increase the nutrition and HB status of ANC and Adolescent girls through the use of iron utensils and promotion of kitchen garden.

Objectives:

1. To achieve optimum HB levels in ANC and Adolescent girls.
2. iron fortifies iodized To decrease the number of underweight births
3. To promote the optimal feeding practices and consumption of iron and folate rich foods and use of salts along with cooking in iron utensils
4. To intake the increase of green leafy vegetables through promotion of kitchen garden

METHODOLOGY

Aravalli is one of district of Gujarat in India. There are 6 Talukas, 676 villages and 2 towns in Aravalli district.

List of Talukas with population of Arvalli district

Taluka	Population 2011	Male	Female	Households
BAYAD	206391	106364	100027	41774
Bhiloda	239216	121018	118198	48234
Dhansura	106733	55408	51325	21278
Modasa	222625	114577	108048	45143
Malpur	97838	50032	47806	18950
Meghajr	167115	84987	82128	31360

Anganwadi Services is a centrally sponsored scheme under umbrella Integrated Child Development Services (ICDS) Scheme implemented by the governments of State and UT administration. There are 1450 sanctioned Anganwadi Centers (AWCs) in Arvalli, and all the AWCs are operational. Out of which Bayad taluka has 260 functional AWCs as on 2019.

This project was conducted in 2 blocks of bayad taluka of Arvalli District. Total 20 anganwadis were selected from 1 taluka and 2 block.

Sr. No	Taluka Unit	No. of AWC
1	BAYAD-1	10
2	BAYAD-2	10

Methodology

Screening for anemia and distribution of iron utensils

The beneficiaries included in this project are pregnant women and adolescent girls. Total 4152 adolescent girls and 1908 pregnant women are enrolled in the study. HB was estimated of all adolescent girls and pregnant women (those enrolled in study) to screen anemia. HB was estimated by standardized method with active support from health department (FHWs). Treatment was started to those having anemia (HB <11gm %) (As per Anemia Mukh Bharat Operational Guideline) and iron utensils were also distributed to all female having anemia.

Development of kitchen garden

20 AWCs were selected (1 from each Taluka) for development of kitchen garden. (also called "Poshan Vatika ") Beneficiaries were also provided seeds for development of kitchen garden at their house backyards if space is available.

Provision of nutrition kit

After screening for anemia adolescent girls were provided nutritional kit for 3 months. The kit includes black dates, Jaggery, ragi flour, pulses like chana, tuwer, mung and fruits.

Out of total 1450 anganwadi centers (AWCs), 20 centers were selected for this innovation project in September 2020. Kitchen gardens were prepared in 260 AWCs. Hemoglobin was estimated of 1153 adolescent girls enrolled in selected AWCs and 0 antenatal women were screened for anemia.

All antenatal women (1908) and adolescent girls (4152) were provided nutrition kit in January 2021 and iron utensils were distributed in July 2020.

In March 2021, follow up of all beneficiaries were conducted in which HB was estimated again and they were interviewed using pre structured questionnaires. During follow up visit all pregnant women were not tracked due to either they delivered or shift to their parents home.

❖ TARGET BENEFICIARIES

- Adolescents Girls
- Pregnant Mothers
- Children (0-6 year)

SN	Type of Beneficiaries	HB Test (Yes/No)	Nutrition Kit (Yes/No)
1	Adolescents Girls	Yes	Yes
2	Pregnant Mothers	No	Yes

SN	Type of Beneficiaries	Bayad-1 (Total Beneficiaries)	Bayad-2 (Total Beneficiaries)
1	Adolescents Girls	2452	1700
2	Pregnant Mothers	1024	904

❖ KITCHEN GARDEN

ક્રમ	ઘટક	કિચન ગાર્ડન				
		આંકેન્દ્રનું નામ	સેજો	ક્ષેત્રફળ (ચો.ફૂટ)	લાભાર્થીઓ	કેટલા લાભાર્થીની શાકભાજી વિતરણ કરેલ
1	2	3	4	5	6	7
1	બાયડ-૧	અરજાણવાવ	બાયડ	1500	53	50
2	બાયડ-૧	બાયડ-૬	બાયડ	1600	85	81
3	બાયડ-૧	નવા ઓઢા	રડોદરા	1250	65	60
4	બાયડ-૧	રણેચી	રડોદરા	1400	69	62
5	બાયડ-૧	કેશરપુરા	ગાબટ	1350	59	55
6	બાયડ-૧	જલમપુરા (સાંઢબા)	સાંઢબા-૧	1800	68	62
7	બાયડ-૧	મહાદેવના મુવાડા	સાંઢબા-૧	1250	29	28
8	બાયડ-૧	આમોદરા -૨	સાંઢબા-૨	1300	35	33
9	બાયડ-૧	ઈંદ્રાણ -૨	સાંઢબા-૨	1250	89	85
10	બાયડ-૧	નાથાના મુવાડા	સાંઢબા-૨	1600	105	101
11	બાયડ-૨	ડાભા	આંબલિયારા	1200	31	28
12	બાયડ-૨	તેનપુર-૧	તેનપુર	1250	96	87
13	બાયડ-૨	ભરવાડના મુવાડા	ડેમાઈ-૨	1450	13	12
14	બાયડ-૨	ઘોડનાલ	આંબલિયારા	1200	17	14
15	બાયડ-૨	દોલપુર	આંબલિયારા	1400	12	10
16	બાયડ-૨	તેનપુર-૨	તેનપુર	1350	107	104
17	બાયડ-૨	ઉંટરડા-૩	તેનપુર	1450	52	48
18	બાયડ-૨	મોટામુવાડા (ડેમાઈ-૫)	ડેમાઈ-૧	1650	66	62
19	બાયડ-૨	પેંટરપુરા	ડેમાઈ-૧	1450	38	34
20	બાયડ-૨	ખાતરીયા	ડેમાઈ-૨	1400	35	32

આ ક્રિયન ગાર્ડન પર ઉગાડેલ શાકભાજીની વિગત	આ ક્રિયન ગાર્ડન પર ઉગાડેલ ફળઝાડની વિગત
Bottle Gourd દુધી	Amla આમળા
Drumstick સરગવો	Chickoo ચીકુ
Brinjal રીંગણા	Papaya પપૈયા
Tomato ટામેટા	Guava જામફળ
Ladyfinger ભીંડા	Lemon લીમ્બુ
Cluster Beans ગવાર	Pomegranate દાડમ
Pigeon pea તુવેર	Mango આંબો
Chilli મરચાં	Jamun જામબું
Luffa ગલકા	Sitafal સીતાફળ
Colocasia Leaves અડવીના પાન	Shetur સેતુર
Green onion લીલી ડુંગરી	
Green Garlic લીલું લસણ	
Cauliflower કુલાવર	
Potato બટાકા	
Fenugreek મેથી	
Spinach પાલક	
Radish મૂળા	
Broad/Butter Beans વાલોર	
Coriander ધાણાં	

❖ NUTRITION KIT DETAILS

KIT-1 COMPONENTS
ખજૂર, ગોળ, ચણા, મગ, તુવેર દાળ, સરગવાનો પાવડર

KIT-2 COMPONENTS
ખજૂર, ગોળ, ચણા, મગ, તુવેર દાળ, સરગવાનો પાઉડર અને રાગીનો પાવડર

KIT-3 COMPONENTS
ખજૂર, ગોળ, ચણા, મગ, તુવેર દાળ, સરગવાનો પાવડર

Number of beneficiaries benefited under this kit

SN	BLOCK	KIT-1	KIT-2	KIT-3
1	BAYAD-1	1023	1540	512
2	BAYAD-2	1023	1540	510

❖ ANEMIA TRAINING DETAILS

ક્રમ	તાલીમ	તાલીમના લાભાર્થી	તાલીમકર
૧	તાલુકા કક્ષાએ	મુખ્ય સેવિકા, NNM બ્લોક કો-ઓર્ડિનેટર, તાલુકા હેલ્થ સુપરવાઈઝર, તાલુકા હેલ્થ વિઝીટર એમ.ઓ., આયુષ એમ.ઓ., આર.બી.એસ.કે એમ.ઓ., ફાર્માસીસ્ટ, એફ.એચ.ડબલ્યુ, એસએચજી ના સભ્યો	NGO/તજજ્ઞો દ્વારા
૨	પ્રાથમિક આરોગ્ય કેન્દ્ર કક્ષાએ	આશા, આંગણવાડી કાર્યકર	એમ.ઓ. / મુખ્ય સેવિકા

❖ HB TEST DETAILS

ક્રમ	ઘટકનું નામ	કુલ પસંદ કરેલ લાભાર્થીઓ		HB સ્ક્રીનીંગ કરેલ લાભાર્થીઓ		HB સ્ક્રીનીંગ નો મહિનો	ઓછું HB જણાયેલ (અરેખર) લાભાર્થીઓ	
		કિશોરીઓ	સગર્ભાઓ	કિશોરીઓ	સગર્ભાઓ		કિશોરીઓ	સગર્ભાઓ
1	2	7	8	9	10	11	12	13
1	BAYAD-1	2452	1024	703	0	8 થી ૧૦ મો મહિનો	56	0
2	BAYAD-2	1700	904	450	0	8 થી ૧૦ મો મહિનો	39	0
TOTAL		4152	1928	1153			95	0

❖ EVALUATION

In 20 anganwadi centers kitchen garden was developed. Hemoglobin was estimated of 1153 adolescent girls enrolled in selected AWCs out of which 80 were anemic and were screened and no one antenatal women was anemic.

distribution of beneficiaries

BLOCK	No. of Adolescent girls
BAYAD-1	56
BAYAD-2	39
Total	95

Age wise distribution of adolescent girls

Age	No. of Adolescent girls
12	2
13	6
14	3
15	18
16	17
17	28
18	21
Total	95

BMI status among adolescent girls and antenatal women

BMI (adolescent girls)		Before	After
<18.5	Underweight	50	37
18.5-24.9	Normal weight	42	34
25.0-29.9	Pre obesity	3	3
30.0- 34.9	obesity	0	0
Total		95	73

Hemoglobin status among adolescent girls

Adolescent Girls	Avg.HB
Before intervention	7.0
After intervention	8.9

CONCLUSIONS

This project has been laid out in the district to increase the nutrition and HB status of ANC and adolescent girls through the use of iron utensils and promotion of kitchen garden. Total 4152 (1153 adolescent girls screened) (11-18 years) and 1928 pregnant women are enrolled in the project from 260 Anganwadi Centers of Bayad taluka Arvalli district. In this intervention project all beneficiaries were visited twice to check the effect of intervention like nutrition kit, iron fortified salt, kitchen garden, home visit, counseling etc. BMI was calculated based on weight & height of all beneficiaries in project. Weight gain shown in follow up visit of all beneficiaries and the difference was statistically significant among adolescent girls. while no statistically significant changes in BMI after intervention. In follow up visit Hb was estimated and the intervention has positive impact on Hb level.

Prof. Dr. Piyush Sinh,

Dep. Of Food and Nutrition, Home Science,
Arts College, Modasa. Dist. Aravalli.(Gujarat)

Development of kitchen garden



ANEMIA TRAINING



Distribution of iron utensils and nutrition kit



Monitoring visit at Anganwadi centre and kitchen garden



MONITORING EVALUATION VISIT AT AWC





Account Name : Mr. PIYUSHKMAR RAMVILAS SINH, Mrs. AKANKSHA PIYUSHKUMAR SINH
Address : 32MAZUMNAGAR SOCIETY
MEGHRAJ ROAD
MODASA-383315
Sabar Kantha
Date : 7 Jul 2024
Account Number : 00000030135689628
Account Description : REGULAR SB CHQ-INDIVIDUALS
Branch : MODASA
Drawing Power : 0.00
Interest Rate(% p.a.) : 2.7
MOD Balance : 0.00
CIF No. : 85077620648
IFS Code : SBIN0000429
(Indian Financial System)
MICR Code : 383002051
(Magnetic Ink Character Recognition)
Nomination Registered : No
Balance as on 10 Aug 2021 : 5,82,110.74

Account Statement from 10 Aug 2021 to 10 Aug 2021

Txn Date	Value Date	Description	Ref No./Cheque No.	Debit	Credit	Balance
10 Aug 2021	10 Aug 2021	TO TRANSFER- ICDSL10082021074752642311 Project-	TRANSFER TO 34976412413		1,00,000.00	5,72,110.74

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