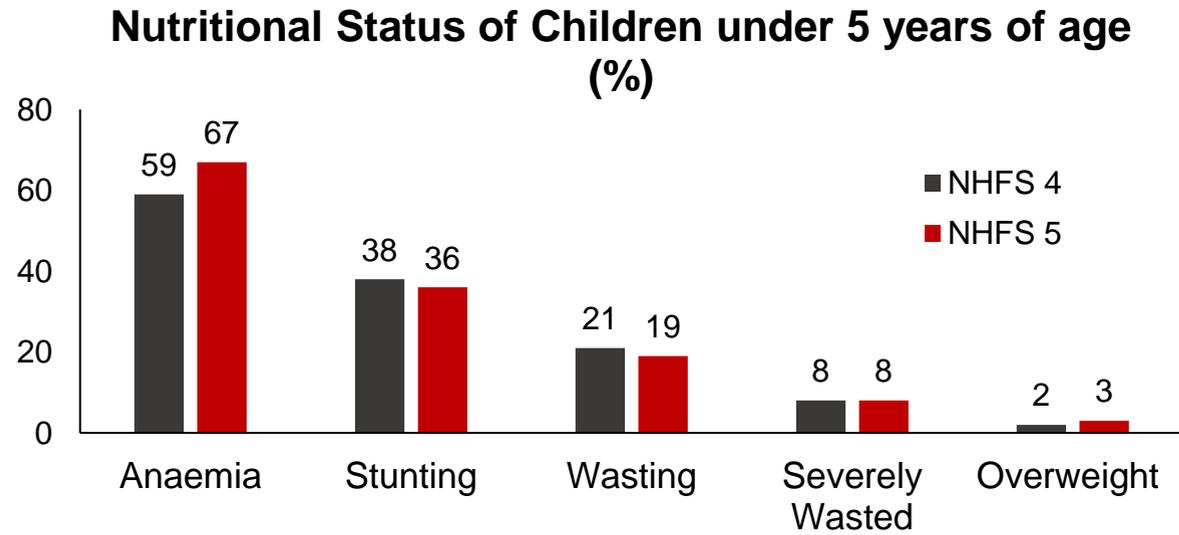




Endline Evaluation of Holistic Nutrition Program (HNP)

Tata Chemicals Society for Rural Development (TCSR D)

Overview of Nutrition & Health in India



- Anaemia has significantly worsened from NFHS 4 to NFHS 5
- Only marginal decrease in cases of stunting and wasting.
- Incidences of wasting and stunting in India are much higher than Asian average

	Asia	India	Difference
Stunting (u-5)	22%	36%	14%
Wasting (u-5)	9.1%	19%	10%
Anemia (women)	49% (South Asia)	53%	4%

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Key Indicators of women health and nutrition in India-



Overview of Tribal Nutrition & Health in India

- As per Census 2011, the population of tribals in India is 8.6% of total population.
- 41% of these belong to the 'below poverty line.'
- This low socio-economic status perpetuates poor health and nutrition for mothers and children

<p>57 per 1000 live births Under five mortality</p>	<p>44 per 1000 Infant mortality rate</p>	<p>19% Higher risk of maternal death in neonatal phase</p>	<p>45% Higher life risk of mother in post-natal phase</p>
<p>Under 5 mortality higher than other groups by 19 live births</p>	<p>Infant mortality higher than other groups by 12 births</p>	<p>In comparison to other groups in the country</p>	



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Overview of Holistic Nutrition Program

To alleviate the women and child health and nutrition challenges, and improve nutrition outcomes,

TCSRDR initiated the Holistic Nutrition Program (HNP).

Program Beneficiaries- Pregnant women, lactating mothers, adolescent girls (direct) and community members (indirect)

Vision: "To promote positive Health, prevent Undernutrition in children and reduce the Morbidity & Mortality among women & children due to Malnutrition".

Approach:

1000 days of Life

Objective 1

Enhance nutritional status:

Fill Tribal Thali with the missing components through locally available nutritious food products and make it a complete balance diet for sustainable & positive changes

Objective 2

Linkage: Capacity building and community health education:

Engage with communities to improve knowledge and promote health seeking behaviour.

Program ensured availability, adequacy and diversity of food through,

Nutri Club:

- ✓ Thali Program
- ✓ Promotion of kitchen garden training
- ✓ Awareness on locally available nutritious food
- ✓ Creating awareness on food processing, preservation and preparation by nutritious recipe demonstration

Program engaged with communities to improve knowledge

- ✓ Capacity building training of ASHA/AWW (health and nutritional awareness topics, breast feeding practices)
- ✓ Health awareness in schools (Nutrition, health, menstruation etc.)
- ✓ Village health and Nutrition Day

Program Locations



Pati Block, Barwani District, Madhya Pradesh

District Glimpse

- 84% population is tribal
- Among top 5 districts within the state with highest burden of stunting among children under 5
- Performing poorly in wasting, underweight, anemia in comparison to state



Dharni Block, Amravati District, Maharashtra

District Glimpse

- 77% population is tribal
- Performing poorly on most parameters of child health such as stunting, underweight and anemia in comparison to state
- 46% prevalence of anemia in women



Study Methodology

- The study adopts a mixed methodology to gauge the impact through survey questionnaires, key informant interviews (KIIs) and Focused Group Discussions (FGDs) with the relevant stakeholder groups
- Evaluation goal is to map the current levels of awareness around nutrition, the source of awareness, and the key behavioral change for improved nutrition and health.

#	Stakeholders	Data collection tools	Pati block, Barwani, Madhya Pradesh	Dharni block, Amravati, Maharashtra
1	Pregnant Mothers	Survey	125	100
2	Lactating mothers with children less than 2 years old	Survey	52	75
3	Adolescent girls	Survey	50	50
4	ASHA workers	Key Informant Interview	5	5
5	Anganwadi workers	Key Informant Interview	5	5
6	School principal/teacher	Key Informant Interview	3	3
7	ICDS officials	Key Informant Interview	2	2
8	Community leaders	Key Informant Interview	3	3
9	Adolescent girls and boys	Focused Group Discussions	1	1
10	Community Leaders	Focused Group Discussions	1	1
11	Pregnant Mothers	Focused Group Discussions	-	1
12	Lactating Mothers	Focused Group Discussions	1	-



The study sampled 20 villages out of 77 for the analysis.



Key Findings



Key Findings on Impact Indicators

S.No.	Major Indicator	2017-18 (%) (baseline)	2020-21 (%) (current status)	% change (in 3 years)	HNP: Annual % changes	Reference Value (Poshan Abhiyaan Target)
1	Reduction in Prevalence of Stunting (U 5 Children)	67	52	15	7	2
2	Reduction in Prevalence of Underweight (U 5 Children)	52	43	11	3	2
3	Reduction in Severe anaemic case	20	2.5	17.5	-	-
4	Reduction in Anaemia Prevalence among women	90	67	26	9	3
5	Increase in NRC admission of SAM children	5	20	15	-	-
6	Increase in IFA consumption	10	82	72	-	-
7	Increase in functioning and regularity of VHND sessions	20	83	63	-	-
8	NRC admission of severe malnourished child	5	20	15	-	-

Key Behavioural Changes

75.5% stated that food has become more diverse and nutritional along with evident changes in the dietary practices followed by pregnant women.

01

67% have been actively using the recipes since they find the extremely useful and feel empowered to make health decisions for their children

02

69.5% believed that community interest to participate in VHND has increased after TCSR's intervention

03

91.34% lactating mothers have positively responded to increase in consumption of supplements like IFA tablets, vitamin tablets among pregnant women and mothers

04

69.23% adolescent girls have been able to adopt healthy WASH practices at home post attending sessions.

05

75.19% of the adolescent girls have been able to create awareness in the community pertaining to health and sanitation

06



Demography

Pati Block, Barwani District, Madhya Pradesh

Sample

133 pregnant women

52 lactating women

50 adolescent girls

- Average age of pregnant women, lactating mothers and adolescent is 24, 25 and 16 years old, respectively.
- Almost 100% sample belongs to the scheduled Tribe (ST) group.



Low education with 78% pregnant and 69% lactating mothers being uneducated.



The women are either involved in farming (40%) or are home-makers (60%).



Around 95% of households earn less than 1 Lakh rupees per annum. 99%- BPL Card holders



Households live mostly in Pucca or semi Pucca homes



Households on an average had 7 family members

Dharni Block, Amravati District, Maharashtra

Sample

100 pregnant women

75 lactating women

50 adolescent girls

- Average age of pregnant women, lactating mothers and adolescent is 24, 24 and 16 years old, respectively.
- The sample is dominated by scheduled castes (78%) followed by scheduled tribes (15%) and Others (8%)



Majority of pregnant (43%) and lactating (40%) mothers have completed 10th standard



The women are either involved in farming (40%) or are home-makers (60%).



Around 90% of households earn less than 1 Lakh rupees per annum. 96%- BPL Card holders



Households live mostly in huts or semi Pucca homes



Households on an average had 4-5 family members

ASHA and Anganwadi workers

The frequency of visit by ASHA/AWWs increased along with increase in services provided with inclusion of hospital check-ups, information on nutrition, breast feeding practices etc.

Pati Block, Barwani District, Madhya Pradesh

Major impact from Intervention



- 89% of pregnant, 100% of lactating and 92% of adolescent stated that frequency of visits has increased in recent years.
- 86% of pregnant, 96% of lactating and 96% of adolescent stated that services of ASHA and AWW have improved in last 4 years

Types of improvements in service

- Increase in hospital delivery
- Linkage of community with govt. schemes
- Timely supply of supplementary food
- Timely home visits and vaccinations
- Prevention of child marriage
- Elaborate discussion on menstruation
- Information on nutrition
- Improvement in knowledge of breast-feeding practices

“TCSRDR was very helpful in providing guidance on breast feeding. The usage of demo dolls for breast feeding was also instrumental in building knowledge.”

Rahbai, Guddi, Barwani- ASHA worker since 2010

Dharni Block, Amravati District, Maharashtra

Major impact from Intervention



- 83% of pregnant, 61% of lactating and 54% of adolescent stated that frequency of visits has increased in recent years.
- 90% of pregnant, 69% of lactating and 58% of adolescent stated that services of ASHA and AWW have improved in last 4 years

“In case of breastfeeding, there were myriads of myths such as wiping of women with broom if they went out, and only then allowing them to eat. However, after awareness measures by TCSRDR, the myths are slowly declining.” – AWW since 2007

Benefits of discussion with ASHA/AWW

- Improved awareness on unhealthy beliefs and myths
- Improved self awareness towards health and sanitation
- Improved knowledge on childcare
- Improved knowledge on breast feeding practices and latching
- Improved knowledge on infant vaccination and pregnancy vaccination

Ante Natal Care (ANC) and Awareness

ANC has seen a good improvement across two regions, in terms of awareness generation, services provided, and increase in demand for doctor check-ups.

Pati Block, Barwani District, Madhya Pradesh

ANC awareness

Pregnant women

70%

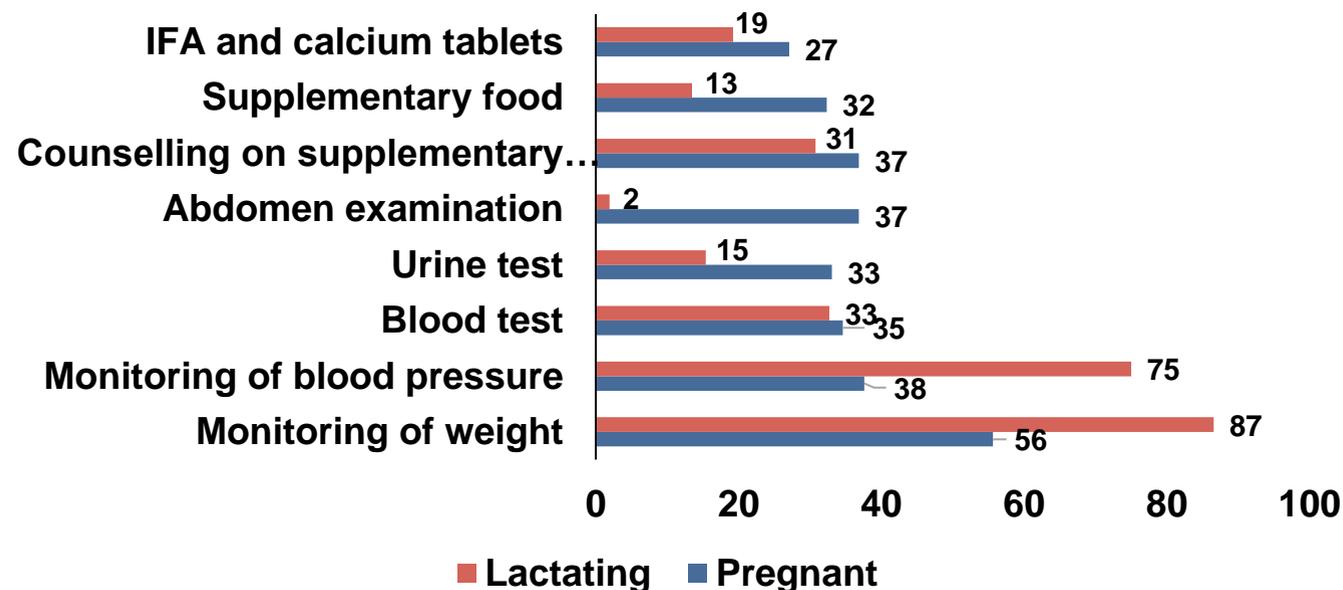
Lactating women

77%

- Most women had received ANC knowledge from ASHA or AWWs (92%), followed by TCSR field staff (40%).
- Majority received timely ANC services from 1st trimester onwards

“ANC has helped to track mothers’ health and vitals; this helps to identify the risks. Earlier the mothers would deliver in a weak state, and thereby, the babies would be extremely fragile and weak.”- ASHA worker

Services undertaken under ANC (%)



Dharni Block, Amravati District, Maharashtra

ANC awareness

Pregnant women

71%

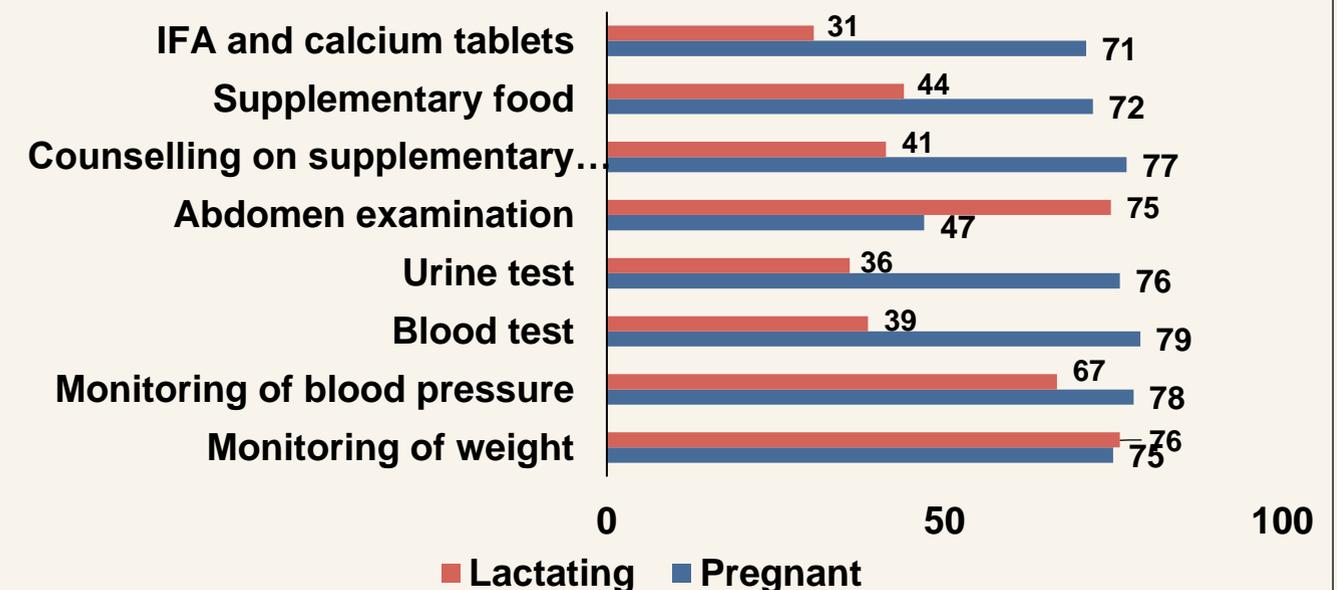
Lactating women

64%

- Most women had received ANC knowledge from ASHA or AWWs (65%), followed by TCSR field staff (35%).
- Majority received timely ANC services from 1st trimester onwards

“The women now demand regular health check-ups to ensure good health during pregnancy”- ASHA worker

Services undertaken under ANC (%)



Awareness Sessions in Schools

Pati Block, Barwani District, Madhya Pradesh

- Only 48% had knowledge of menstruation prior to menstruating revealing gaps in knowledge prior to TCSRDR's intervention.

Major impact from Intervention



Improvement in knowledge and usage of sanitary pads by 79%

Reduction in some myths around periods experienced by 31%

Knowledge shared with family and peers by 72% of girls

Prevailing Challenges



60% of girls stated that they still follow the myths and beliefs around periods. This reveals that these myths are culturally developed over the years and would require consistent campaigns for eradication.

Prior to the intervention, the ASHAs were unsure on how to reach out to the girls with training sessions, however, post training, there was an understanding on the needs of young girls and targeted areas for awareness creation.

TCSRDR provided diet and hygiene sessions to the students. It also provided menstrual hygiene awareness sessions; under which, the girls found usage of sanitary pads as an important learning. They also began questioning certain myths around menstruation.

Dharni Block, Amravati District, Maharashtra

Our school has hand washing facilities past 5 years, but it was unused since students were unaware on usage of these facilities. It was only after the regular intervention of the Program coordinators who visited the schools and took sessions through visual and sometimes audio modes, on personal hygiene and sanitation, the students adopted the methods.

- Headmaster, ZP School, Dharni Block

- Only 50% had knowledge of menstruation prior to menstruating revealing gaps in knowledge prior to TCSRDR's intervention.

Major impact from Intervention



56% stated that TCSRDR has broken some myths

33% stated that period related food restrictions have declined

Knowledge shared with family and peers by 62% of girls

Girls stated that they have started cooking during periods after intervention

"We didn't cater to adolescent girls on menstruation much, but after TCSRDR intervention, our visits have increased."

- ASHA worker since 2006

Anemia Awareness

In Pati Block, Perception on Anemia prevalence has declined substantially due to increase in supplementary nutrition, vegetables, and frequency of check-ups. The in-take of calcium, IFA and vitamin tablets has increased among women in both blocks.

Pati Block, Barwani District, Madhya Pradesh

	Pregnant women	56%
Anemia awareness	Lactating women	69%
	Adolescent girls	54%

Dharni Block, Amravati District, Maharashtra

	Pregnant women	56%
Anemia awareness	Lactating women	69%
	Adolescent girls	54%

- Those who were aware about anemia got to know about it through ASHA/AWW (84%) followed by TCSR staff (41%)

- Those who were aware about anemia got to know about it through ASHA/AWW (67%) followed by TCSR staff (43%) and doctor (52%)

Major impact from Intervention

94% of pregnant women who stated high anemia prevalence in past believed that it has reduced after TCSR's intervention due to,

- Increase in supplementary nutrition of IFA and calcium tablets by 74%
- Increase intake of vegetables and other nutritious food
- Regular check-ups by ASHA workers

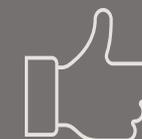
Respondents revealed high level of awareness on reasons for consuming supplementary tablets on calcium, IFA and Vitamin A



Major impact from Intervention

73% of pregnant and lactating mothers took supplements of either calcium, IFA and vitamin A.

Awareness of usage of supplements– it helps with anemia, provides energy, reduces weakness and improves milk quality



Village Health and Nutrition Day (VHND)

VHND increased after TCSRDR's intervention in both locations. There was also increase in services provided by the healthcare workers and higher awareness on government schemes.

Pati Block, Barwani District, Madhya Pradesh

VHND awareness	Pregnant women	78%
	Lactating women	77%
	Adolescent girls	64%

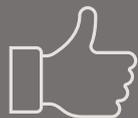
Dharni Block, Amravati District, Maharashtra

VHND awareness	Pregnant women	62%
	Lactating women	56%
	Adolescent girls	42%

Around 71%, 73% and 59% pregnant women, lactating mothers and adolescent girls attended VHND.

Around 52%, 43% and 34% pregnant women, lactating mothers and adolescent girls' participation attended VHND.

Major impact from Intervention



75% respondents stated that services provided in VHND prior to intervention were limited to health tests and immunization.

However, post the intervention, the services has increased including awareness on nutrition, diet, supplements and government schemes.

72% believed that community interest to participate in VHND has increased after TCSRDRs intervention.

Improved awareness on government schemes

Major impact from Intervention



As per 60% of the respondents, it was found that VHND services have increased after TCSRDR intervention,

67% believed that intervention has led to increased interest among community members for participation.

Around 67% of pregnant and lactating mothers stated that the program also assisted them to mentally prepare for pregnancy.

Improved awareness on government schemes

Nutrition Needs Awareness

Pati Block, Barwani District, Madhya Pradesh

- Among pregnant women, 84% believed that their diet is different. They highlighted the need of fiber, iron and protein rich food
- Nutrition awareness received from ASHA/AWW (89%)

69% stated that food has become more diverse and nutritional.

Additional food intake-Bitter gourd, eggs, fruits, fenugreek, meat, daliya, supplements etc.

- Among lactating women, 75% were aware of nutritional needs of breast-feeding women.
- They stated that women should have balanced meal with focus on fruits, vegetables, milk and eggs.
- Nutritional awareness received from ASHA/AWW (85%)

86% stated that food has become more diverse and nutritional.

Additional food intake-Daliya, paneer, meat, different vegetables etc.

“After the TCSR intervention, young mothers have been breast feeding children for 6 months, and post that, offering healthy complementary feeding along with milk at least 3-4 times a day. This has ensured healthy weight of new babies.”- AWW

Majority of pregnant and lactating mothers from both locations had gained some awareness on their special nutritional requirements primarily through ASHA and AWWs. They also had improved awareness on u-5 nutrition and adolescence to improve nutrition.

Dharni Block, Amravati District, Maharashtra

- 88% believed that diet of pregnant women is different.
- Diet should include egg, fruits, vegetables and pulses
- Nutrition awareness received from ASHA/AWW (87%)

65% stated that food consumed by pregnant women have changed over time

Additional food intake- Amla, eggs, fruits, milk and milk products

- 56% were aware of nutritional needs of breast-feeding women.
- They stated that women should have balanced meal with focus on fruits, vegetables, milk and eggs.
- Nutritional awareness received from ASHA/AWW (65%)

44% stated that food has become more diverse and nutritional.

Additional food intake- Peanut laddus, green vegetables, etc.

“With TCSR intervention, there was an understanding among mothers and girls that the onset of menstruation imposes additional nutrition needs. It led to increased intake of iron rich food among girls during menstruation such as green leafy vegetables, jaggery, meat etc. They also eat Amla to complement iron with Vitamin C rich food. Most of it is grown through kitchen/nutria garden” - AWW

Nutri Club

Through the nutri club, the women were provided learnings on food preservation and food processing. The adoption of new recipe was seen among them for dietary diversity.

Pati Block, Barwani District, Madhya Pradesh

Awareness on nutri-club	Pregnant women	44%
	Lactating women	56%
	Adolescent girls	54%

Dharni Block, Amravati District, Maharashtra

Awareness on nutri-club	Pregnant women	36%
	Lactating women	47%
	Adolescent girls	34%

Key Learnings from Nutri Club



- Methods to ensure preservation of foodstuff
- Wadi making with pulses
- Pickle making with fruits
- Fenugreek papad making
- Dried vegetables

Around 48% learnt new recipes via nutri club

Around 40% learnt new recipes via nutri club

Key Learnings from Nutri Club



- Jaggery Laddus
- Peanut Laddus
- Til Laddus
- Sprouts
- Sattu Shira
- Dried Vegetables

Tribal Thali Programs

The tribal thali program had substantial awareness in Pati block, and moderate awareness in Dharni block. It led to inclusion of new and diverse food items in diets. It also improved beneficiaries' knowledge on new recipe.

Pati Block, Barwani District, Madhya Pradesh

Tribal Thali awareness

Pregnant women	80%
Lactating women	87%

76% found the recipes to be useful

62% actively use the recipes

75% women stated that they feel empowered to make health decisions for their children

Major impact from Intervention

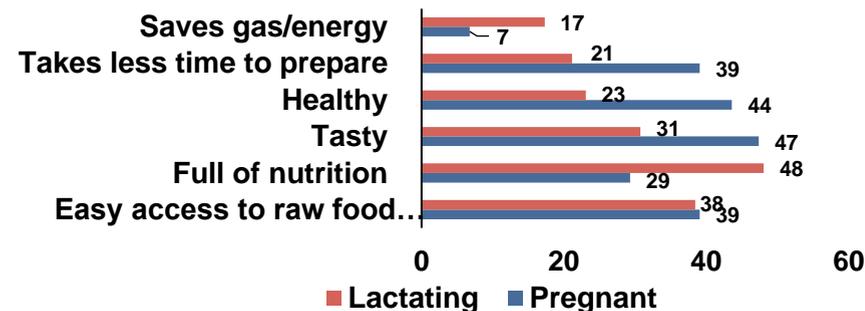


“Pregnant mothers state that diet has reduced weakness and improved health.”

New items consumed-

- Amla, Lemon, Jaggery, Chickpea, Tamarind, Bitter gourd, coconut water, fenugreek seeds

Opinion on new recipes (%)



Dharni Block, Amravati District, Maharashtra

Tribal Thali awareness

Pregnant women	80%
Lactating women	87%

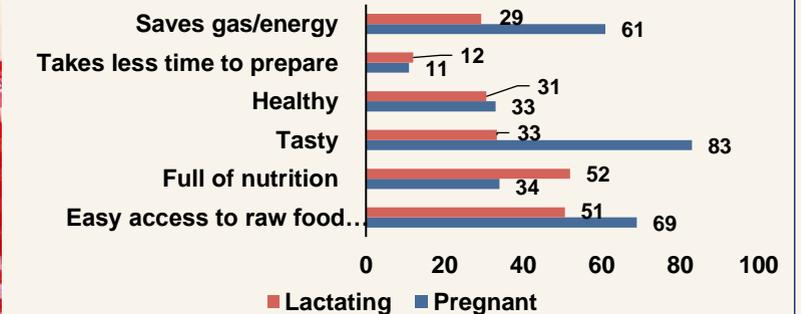
83% found the recipes to be useful

72% actively use the recipe

Major impact from Intervention



Opinion on new recipes (%)



New items consumed-

- Amla, Rajgyra, drumsticks, dates, fenugreek, peanut laddus, til laddus, coconut laddus, nuts, spinach, carrot, eggs, milk products

Nutri/Kitchen Garden

The kitchen garden has been cited to be extremely useful for solving the dietary needs of the community through the addition of organic home-grown vegetables. It has also been instrumental in saving money for the purchase of vegetables from the market.

Pati Block, Barwani District, Madhya Pradesh

	Awareness on Kitchen Garden	Adoption of Kitchen Garden
Pregnant women	55%	37%
Lactating women	69%	65%
Adolescent girls	56%	-

Dharni Block, Amravati District, Maharashtra

	Awareness on Kitchen Garden	Adoption of Kitchen Garden
Pregnant women	68%	65%
Lactating women	64%	59%
Adolescent girls	54%	-

Impact of Kitchen Garden among those who adopted

It has the potential to solve diet needs of community	91%	90%	70%
Kitchen garden has increased vegetable availability	94%	85%	24%
It has improved consumption of healthy organic food	75%	35%	24%
It has increased awareness on local plant produce availability	52%	13%	12%
It ensures cost effective ways of living	37%	15%	18%
It provides fodder for cattle rearing	44%	13%	46%

Impact of Kitchen Garden among those who adopted

“We never thought of having a kitchen garden due to water availability issues. However, post TCSR intervention, we realized that wastewater from kitchen can be reused for growing plants. Now we can grow vegetables like spinach and tomato in our backyard.”

Community Leaders Focused Group Discussion, Ukupati, Dharni, Maharashtra

- Additional vegetables in diet are lady finger, brinjal, green vegetables, beetroot, sweet potato, etc.

Sustainability Plan

A key element in demonstrating sustainability is the project's exit strategy, which clearly describes how project activities, outputs, and outcomes will be phased out. This also involves thorough assessment of an appropriate time to hand over the project to key stakeholders who will maintain/continue the project activities and outputs post completion of the intervention.

TCSR team designed a gradual exit strategy to ensure smooth transition of responsibilities and creating project ownership



Key motivators for ensuring sustainability

Nutri Clubs

There was good awareness among the respondents regarding nutri clubs and respondents got to know about new recipes via these nutria clubs.

Capacity enhancement of ASHA and Anganwadi as mobilizers

87% respondents from Dharni and 89% from Pati received nutrition awareness from ASHA and Anganwadi, suggest better clarity among the frontline workers.

Empowering adolescent and youth as change agents

75.19% of the adolescent girls have been able to create awareness in the community pertaining to health and sanitation.

Program through Key Stakeholders

The community was not very conscious or aware of good nutrition earlier. But now due to programs like TCSR and consistent efforts by Anganwadi workers, awareness has developed around nutrition as a strong preventive tool for any health issues.

- **Suman Chouhan, ICDS official past 4 years, managing 8 villages under Pati Block**

One of the major achievements of the program is that there has been very steady decrease in cases of Anemia among the children. There was high incidence of Anemia and malnutrition in 2015-16 which declined due to awareness around nutrition and health. Now, the admission of children in nutrition rehabilitation center has declined or reduced to 14 days only. Another significant achievement was due to increase in frequency of visit by ASHA workers to pregnant women households specifically 28 days before the child delivery. This was instrumental in reducing women's work in fields during the last month.

- **Bhagwati Madam, Supervisor for 11 ASHA workers in 8 villages of Dharni Block**

Pati block is a tribal area with extremely low awareness on health and nutrition. Even though they have proximity to forest, they are not fully aware of the benefits of many natural resources. They also have set ways of living and are resistant to change. Given these issues, a multi stakeholder intervention was required to break ice and intervene for change. That has been achieved through the collective efforts of our department along with CSR programs at field level.

- **Sunanda Gulwani, ICDS official past 5 years, managing 10 villages under Pati Block**

Program Impact on Sustainable Development Goals (SDGs)

Direct effect of HNP on SDG

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 3: Ensure healthy lives and promote well-being for all at all ages



Indirect effect of HNP on SDGs

SDG 1: No poverty

SDG 5: Gender Equality

SDG 4: Quality Education

SDG 8: Decent work and economic growth



Conclusion and Recommendation

- The HNP program intervention was instrumental in improving and bringing about community level awareness on myriads of nutrition information which can have a positive effect in reduction of challenges of undernutrition, malnutrition, Anemia, weakness, maternal mortality, neo natal mortality etc.
- Certain features of the program in relation to breast feeding techniques, consumption of iron-rich food and supplements, diversity in diet, kitchen garden prevalence have seen an uptake among the respondents.

Recommendations

1. Bi-monthly follow up training sessions with stakeholders
2. Sample food tasting tables
3. Advocacy with government
4. Improvement in Education to improve community understanding
5. Skill development initiatives
6. Medical pharmacy for community

