Impact **Assessment**

Aadhar Aangan Program

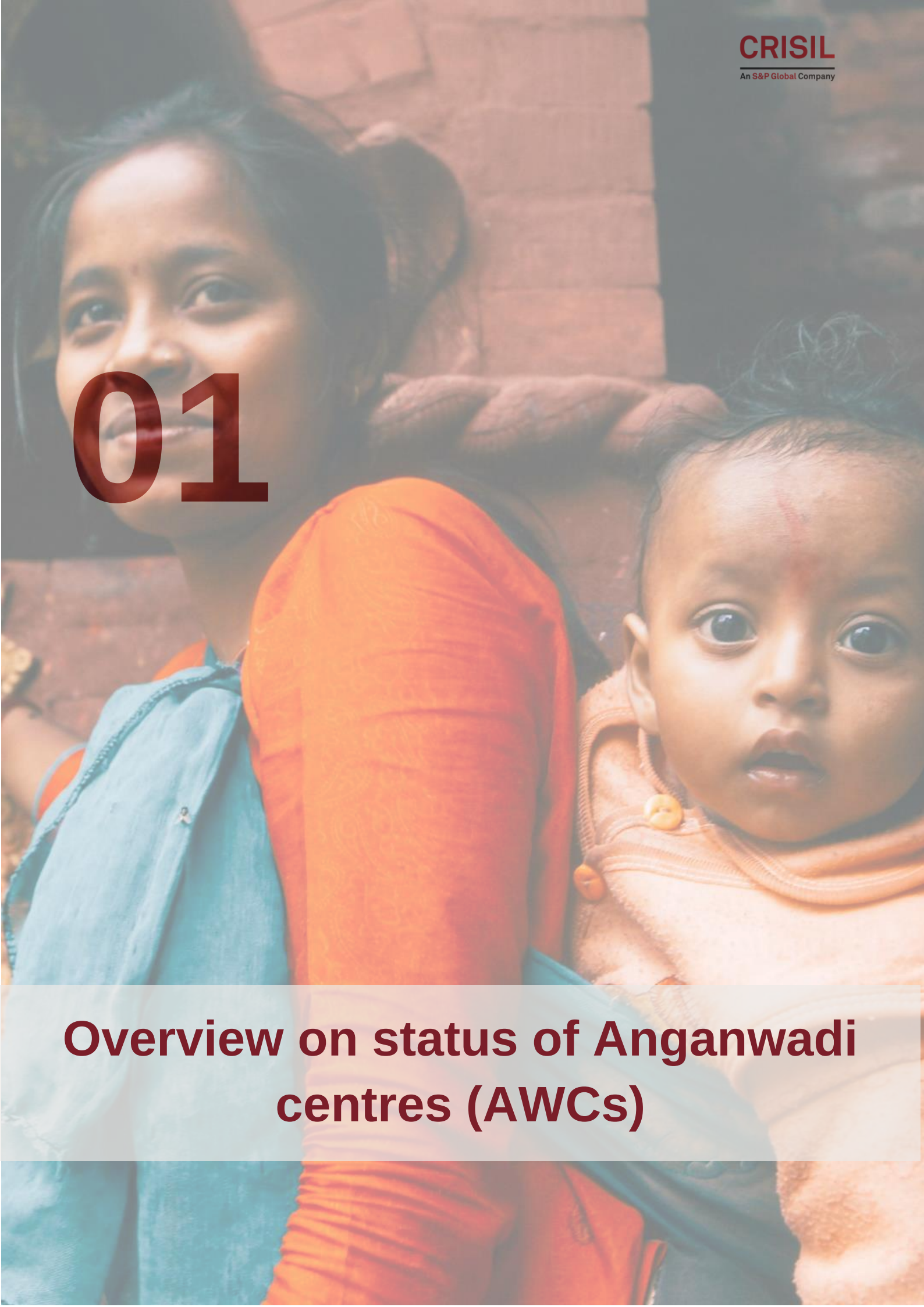
Aadhar Housing Finance Limited (AHFL)

Aadhar Housing Finance Ltd
GHAR BANEGA, TOH DESH BANEGA.

Aadhar आंगन

CRISIL
An S&P Global Company

Contents



01

Overview on status of Anganwadi centres (AWCs)

Overview on Status of Anganwadi Centres: Empowering early childhood education and nutrition for mothers and children

Early childhood offers a critical opportunity to shape a child's holistic development and to build a foundation for their future. The children require health care, nutrition, protection from harm, opportunities for early learning and responsive care giving from parents and care givers to achieve their full potential. As per the Lancet Series on Advancing Early Childhood Development, it was estimated that in 2010 about 250 million children from low- and middle-income countries under the age of 5 were not reaching their development potential due to extreme poverty and stunting. India is a home to 63.4 million of these children requiring effective interventions.[1] The interventions should integrate nurturing care and protection for promoting child development in the early years.

In recognition of the scale of issue, the international community based on robust empirical evidence adopted the nutrition care framework known as Nurturing Care for Early Childhood Development in 2018[2], stressing on the importance of investment in early years, especially preschool years. A large body of evidence has shown that preschool attendance is positively associated with both cognitive and non-cognitive skills development in developing and developed countries[3]. Further, children who attend early childhood programmes are less likely to drop out of school than other children. A study in Indian states found out that child, ranging from 7 to 18 years were more likely to be enrolled in school if they had attended early childhood programmes[4].

In India, the term early childhood care and education (ECCE) is used to refer to all care and education services provided for children below 6 years. The primary programme run by government under the Ministry of Women and Child Development (WCD) for ECCE is the Integrated Child Development Services (ICDS). ICDS is the largest child development programme in the world and is operated through a network of Anganwadis. It combines both care and education and is based on four comprehensive objectives.

These include,

- To provide quality health and nutritional services to pregnant and lactating mothers
- To enhance physical and social development of children, birth through age six
- To facilitate coordination between various departments involved in policy making and implementation of early childhood education.
- To provide health and nutrition education to mothers of targeted groups of children

In order to meet these objectives, the ICDS programmes provide a variety of services, such as supplementary nutrition, immunization, health check-up, referral services, treatment of minor illness, nutrition and health education, and preschool education through Anganwadi Centres (AWC). In India, there are currently 1.37 million operational AWCs, covering 87.5 million beneficiaries, primarily children (6 months to 6 years), pregnant women and lactating mothers. [5] However, the uptake of these services is quite low at only 38.2% making it challenging for the beneficiaries to avail themselves of the benefits of early education and nutrition under the programme.[6] The reason for low uptake is primarily due to poor structures of AWCs, inadequate training and capacity building of the Anganwadi workers

[1] Black, M. M., et al. (2017). Early childhood development coming of age: Science through the life course. The Lancet, 389(10064), 77–90

[2] Nurturing Care for Early Childhood Development (2018). Country profiles: India.

[3] Rao, N., Sun, J., Chen, E. E., & Ip, P. (2017). Effectiveness of early childhood interventions in promoting cognitive development in developing countries: A systematic review and meta-analysis. Hong Kong Journal of Pediatrics (new Series), 22(1), 14–25.

[4] Hazarika, G., & Viren, V. (2013). The effect of early childhood developmental program attendance on future school enrolment in rural North India. Economics of Education Review, 34, 146–161.

[5] Ministry of Women and Child Development (MWCD). (2019*).* Annual report 2018–19*.* Ministry of Women and Child Development, Government of India.

[6] Rajpal S., et al. (2020). Utilization of integrated child development services in India, 2016. International Journal of Environmental Research and Public Health*,* 17(9), 3197.

(AWWs), and low budgets for implementation of nutrition support services. As per Niti Aayog's rapid assessment of AWCs across 19 states and union territories, it was found that 41% of the AWCs had either a shortage of space or were unsuitable, whereas 13.7% did not have safe drinking water facilities.[7] In addition, several other studies also revealed shortcomings.[8]

Given these challenges, there should be concerted efforts in developing the infrastructure of AWCs to foster a motivating and energizing environment for the children to learn and grow. This is reiterated by the government of India's efforts on early learning. In 2019, the government of India had released a draft proposal to include the three years before entry into primary school under Right to Education Act[9]. Further, the National Education Policy 2020 (NEP)[10] has laid importance on the universalization of Early Childhood Care and Education (ECCE) with a 2030 target to ensure that all students entering Grade 1 are school ready.

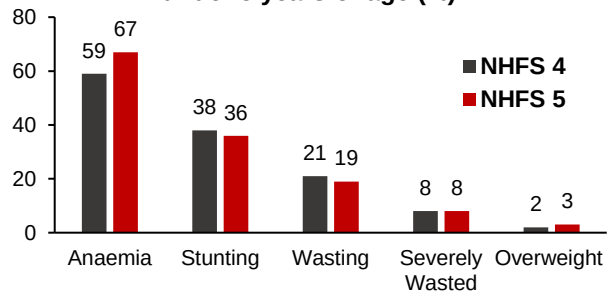
In addition to early learning support, Anganwadi centres also play a pivotal role in facilitating health and nutrition support to pregnant/lactating mothers and children. This is essential to target the critical food deficits visible in the lower economic groups of the country, which is prevalent due to lack of easily accessible and affordable balanced diet to cater the protein, vitamin, minerals, and other crucial needs of the body. In certain cases, the awareness of healthy foodstuff is also a challenge.

The Global Nutrition Report, 2021 highlights the scale of the problem. The World Health Organization, in 2012, identified 6 global nutrition targets to be achieved by 2025— of which 5 targeted maternal, infant, and young children nutrition to address stunting, wasting, anaemia, low birth weight and childhood obesity.

WHO 2012 Nutrition Targets for 2025 for Maternal, Infant and Child Health	India's Track for Achieving these Targets
50% reduction in anemia among women	No progress or worsening
30% reduction in low birth weight	Lack of data support
50% increase in rate of exclusive breast feeding	On course
40% reduction in stunting among children under 5	On course
Reduction of wasting among children under 5	No progress or worsening

Among all targets, India has achieved no progress in wasting and anaemia. In case of wasting, in comparison to Asian average (9.1%). India has 17.3% wasted children under the age of 5. In case of anaemia, the prevalence has become significantly worse for children under-5, as it has increased from 58% in NFHS 4 to 67.1% in NFHS-5.

Figure 1: Nutritional Status of Children under 5 years of age (%)



Additionally, majority (57%) of women of reproductive age are also anaemic in the country. It is to be noted that even though, India is on-course for meeting the targets for stunting, it has 36% of children under the age 5, dealing with the issue. This percentage is much higher than the Asian average of 22% revealing a dire challenge and immediate need to improve the nutrition

[7] Rapid Assessment of Anganwadi centres, Niti Aayog, 2015

[8] Some examples: Chudasama R. K., et al. (2015). Evaluation of nutritional and other activities at Anganwadi centers under integrated child development services program in different districts of Gujarat, India. Journal of Medical Nutrition and Nutraceutical, and CAG (2013). Report of the comptroller and auditor general of India on performance audit of ICDS scheme

[9] Government of India. (2013b). National early childhood care and education (ECCE) policy. Ministry of Women and Child Development

[10] Government of India. (2020). National education policy 2020. Ministry of Human Resource Development, Government of India. (2020). New Delhi: Government of India.

in-take among children. In case of exclusive breast feeding for children under 5, India has reported substantial progress with 58% of infants being exclusively breast fed. Further, there is little awareness on the correct techniques and methods for breast feeding. Breastfeeding is extremely important for early development of babies. It helps to protect them against short- and long-term illnesses and diseases. Studies have shown that breastfed babies have a lower risk of asthma, obesity, type 1 diabetes, and sudden infant death syndrome (SIDS). They are also less likely to have ear infections and stomach bugs.

As a result, a comprehensive approach by all stakeholders, inclusive of government, CSR (Corporate Social Responsibility) and civil society is needed to tackle the crisis of poor nutrition. There is a need to understand the issue and nutrition gap for effective policy level challenges for effective implementation of nutrition programmes. In recognition of these issues, the government of India has implemented several nutrition policies for reduction of malnutrition in the nation.

1) **Integrated Child Development Service (ICDS) –** ICDS was initiated in 1975 to address key issues around malnutrition and child morbidity. The scheme offers Supplementary Nutrition, Pre-school non-formal education, Nutrition & health education, Immunization, Health check-up and Referral service. The program is implemented through Anganwadi centers with the help of Anganwadi workers free of cost.
2) **PM-POSHAN (Prime Minister's Overarching Scheme for Holistic Nutrition)-** PM-Poshan was launched in 2018, as an umbrella body, for mid-day meal scheme (launched in 2001). Under this scheme, primary and upper-primary students receive cooked midday meals in school. The key goal of the program is to reduce cases of malnutrition and under-nutrition, anemia, stunted growth of children and low birth weight (LBW).
3) **National Food Security Act, 2013-** Indian government passed the National Food Security Act (NFSA) in 2013, which led to consideration of food security as a right among citizens of India. Under this act, up to 75% of the rural population, as well as 50% of the urban population, are legally entitled to receive subsidized food grains through the Targeted Public Distribution System.
4) **Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) Program:** Under this program, the government intends to reduce the rates of maternal, newborn and child mortality. Primary services under the act advocacy and awareness initiatives for child health, newborn and adolescent health, family planning, prevention towards HIV virus, girl child health and prenatal awareness and care. This program is the umbrella body for various programs on mothers, infant, children, and adolescent, such as,
   - **Janani Shishu Suraksha Karyakarm (JSSK)-** Scheme to ensure safe delivery of children.
   - **Rastriye Bal Swasthya Karyakram (RBSK)-** Scheme for screening children at birth for defects, diseases, deficiencies, and development delays.
   - **Mission Indradhanush-** Scheme for complete immunization of children
   - **National Iron Plus Initiative (NIPI)-** Scheme to provide biweekly IFA syrup and deworming pills through Anganwadi centres to children within age group of 6 months to 59 months.

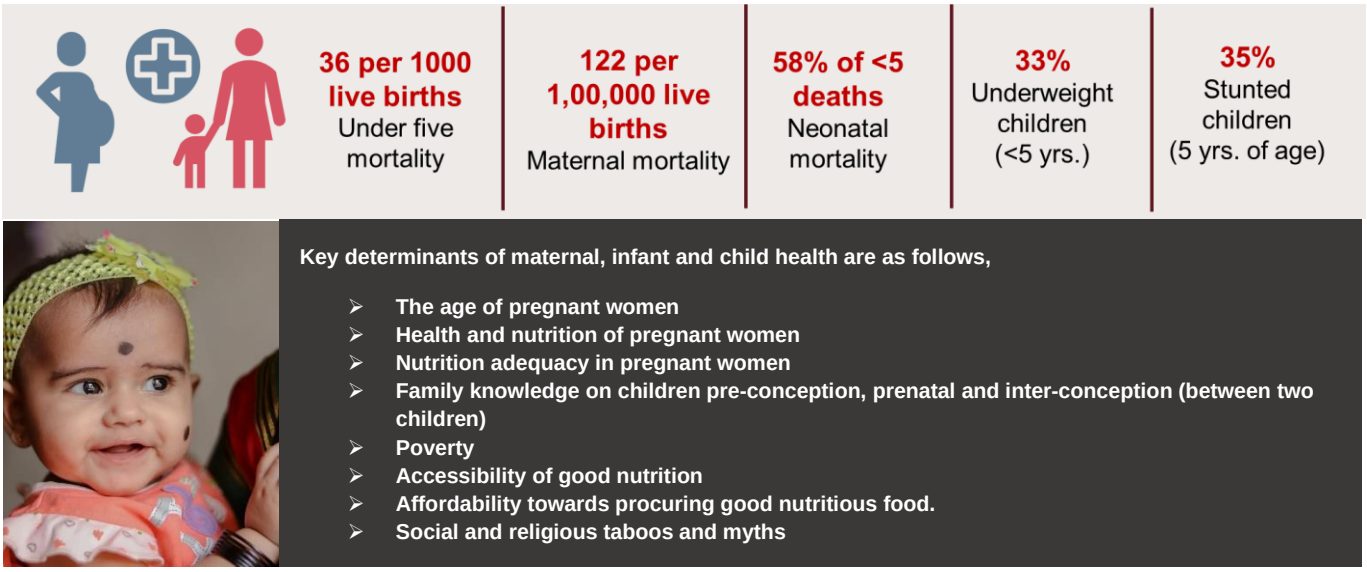
Despite these policies for improvement of nutrition among vulnerable groups, several challenges remain. As per Global Nutrition report 2021, Indians are not meeting recommended dietary targets for essential food groups except grains, as determined by the EAT-Lancet commission on healthy diet. India's diet significantly lacks fruits, legumes, fish, and dairy, which are optimum for growth and development. Furthermore, the challenges are more interrelated between women and child health, as highlighted below,

Interrelation between women and child Health- Balanced nutrition is an important for a child's health, otherwise they become susceptible to malnutrition. Those children who are undernourished underperform in various aspects of life, missing out on opportunities to become productive members of society. In the case of undernutrition, it results in an intergenerational cycle of low productivity and ill health. This happens since under-nourished women, have

higher probability of being under-nourished mothers exacerbating the chance of giving birth to underweight babies who grow into stunted children with reduced mental capacity, have lower resistance to infections and higher risk of morbidity and mortality throughout their lives. In certain cases, they also face neonatal mortality of under the age of five mortality. As a result, women's nutrition— before, during and after pregnancy should have special focus. Apart from improving the chances of a well-nourished child, proper care during also ensures low maternal mortality and neonatal mortality.

As per a study by observer research foundation[11], about one in five women of reproductive age (15-49 years) in India are under-nourished with a body mass index (BMI) of less than 18.5, perpetuating an intergenerational cycle of malnutrition. The proportion is higher in rural areas with 21.2% in comparison to urban areas with 13.1%.

This cycle of inter-generational undernutrition takes form of moderate acute malnutrition (MAM) or severe acute malnutrition (SAM) in children. MAM refers to a moderate deficiency in weight and height for a child's age. Children with MAM have a lower weight and height compared to the standard growth indicators for their age group. This condition is typically identified by a low weight-for-height or low mid-upper arm circumference (MUAC) measurement. SAM is a more severe form of malnutrition characterized by very low weight and height, visible wasting, and sometimes the presence of Edema (swelling caused by fluid retention). Children with SAM have extreme weight loss and muscle wasting, making them critically undernourished. SAM is often diagnosed based on specific criteria, including weight-for-height below a certain threshold, MUAC measurement, and the presence of Edema.



The issues of mother, infant and child are prevalent across country, but more susceptible to vulnerable and marginalized groups due poor accessibility, awareness, and affordability. In consideration of the same, Adhaar housing finance limited (AHFL) initiated the Adhaar Aangan programme in two blocks of Damoh and Tendukheda in Damoh district of Madhya Pradesh. The programme intended to eliminate malnutrition and enhance early childhood education outcomes amongst children under 6 years. It also focused on promoting well-being among pregnant and lactating mothers with focus on healthcare and nutrition. The programme was spread across 412 AWCs, of which 306 were in Damoh block and 112 are in Tendukheda block. The current report provides an Impact Assessment of the Adhaar Aangan programme.

[11] Budget 2022: Numbers and Beyond Series, Observer Research Foundation (ORF)

02

Overview of Aadhar Aangan Programme

The Aadhar Angaan Programme focused on eliminating malnutrition and enhancing early childhood education outcomes amongst children under 6 years. It also focused on promoting well-being among pregnant and lactating mothers with focus on healthcare and nutrition.

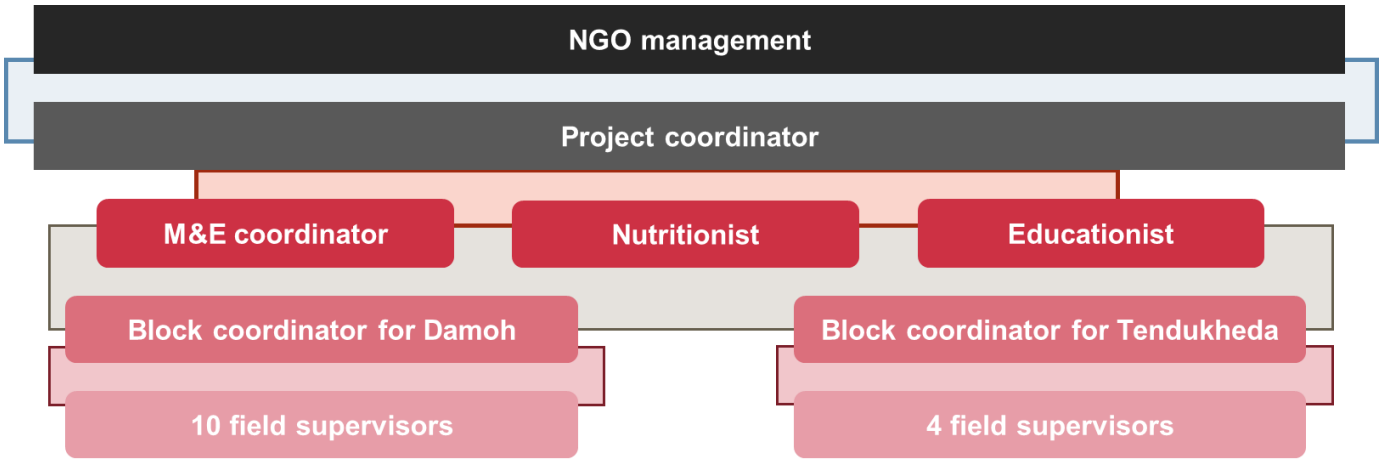
The programme was implemented by Jan Sahas non-governmental organization (NGO) in 3 phases from 2019-2020, 2020-21 and 2021-2022 in Damoh gramin and Tendukheda blocks of Madhya Pradesh.

The key activities under programme include,

1) **Capacity building trainings of AWWs**: The programme organized a 7-day training programme for Model AWCs, split into 3 days, 3 days, and 1-day sessions. The other AWCs received 3 days of training. The critical training areas included nutrition counselling for pregnant and lactating mothers, detection, and cure of malnutrition among children, and early childhood care and education.
2) **Development of learning modules**: Training on early childhood care and education is based on the teaching learning materials developed by Jan Sahas Educationist. The teaching learning material is developed for each month based on any thematic areas (transportation, letters, numbers, etc.)
3) **Infrastructure development of AWCs**: Provide renovation and painting support at model AWCs in lines with the BaLA (Building as a learning aid) model guidelines. The AWCs had letters, numbers, days of the week etc. on the wall. In addition, the AWCs were also provided with toys and education kits to encourage learning based activities.
4) **Improve and regularize attendance at AWCs:** The programme identified irregular and absent children at AWCs and counselled parents on benefits of early childhood learning and need to attend AWCs.
5) **Detection of children with malnutrition**: The programme focused on identifying high-risk children with malnutrition under the MAM and SAM categories by training AWWs on measurements and in certain cases also accompanying them for door-to-door detection.
6) **Door-to-door counselling for children and pregnant/lactating mothers**: The programme provided door-to-door counselling on hygiene maintenance, need for safe pregnancy & institutional delivery, exclusive breastfeeding practices for lactating mothers, food nutrition & balanced diet intake for pregnant mothers and children. In addition, special counselling was provided to mother's whose children were detected with SAM or MAM.
7) **Development of kitchen garden:** During counselling, the pregnant and lactating mothers were encouraged to start their own kitchen garden. Some beneficiaries were also provided vegetables seeds under the programme. The programme also developed nutrition gardens in model AWCs.
8) **Referral to nutrition rehabilitation centre (NRC)**: The parents of children detected with SAM were counselled on need for and importance of admitting their children in NRC for treatment. The children were then supported and referred to NRC for treatment.
9) **Organization of events and activities:** The programme conducted activities like Mangal Divas, God Bharai of pregnant women & Annprashan of children who completed 6 months of their age. There was also a 12-day Poshan Mela to assess and monitor the growth of Moderately Acute Malnourished children.

In addition to the above, there were several other activities undertaken to promote nutrition, health and early learning of children, pregnant and lactating mothers.

The programme implementation partner Jan Sahas NGO had established an end-to-end team to ensure the execution of the project. The team members had defined roles and hierarchy to achieve the goals of the programmes, which is highlighted below,



The project coordinator was responsible for execution of the project—and was reporting to the NGO management. The major responsibilities consisted of conducting monthly meetings of the team to understand the execution status of the programme, and to identify any existing gaps or challenges. The core team for execution for the project coordinator consisted of the Monitoring & Evaluation (M&E) coordinator, nutritionist, and educationist. Each of these had distinct roles.

- **M&E coordinator:** The M&E coordinator was responsible for designing and implementing monitoring systems, collecting relevant data, and analysing programme outcomes. They cross verified data on the field to ensure validity of the study, through random checks, and daily tracking of field supervisors' activities on WhatsApp. The M&E coordinator also prepares monthly and quarterly reports highlighting the changes in the programme.

- **Nutritionist:** The nutritionist designed nutrition related counselling curriculums for the AWWs for catering to pregnant and lactating mothers, and critical children detected with SAM and MAM. The nutritionist also provided recipes for Poshan mela.

- **Educationist:** The educationist planned the monthly curriculums on various thematic areas for early childhood care and education.

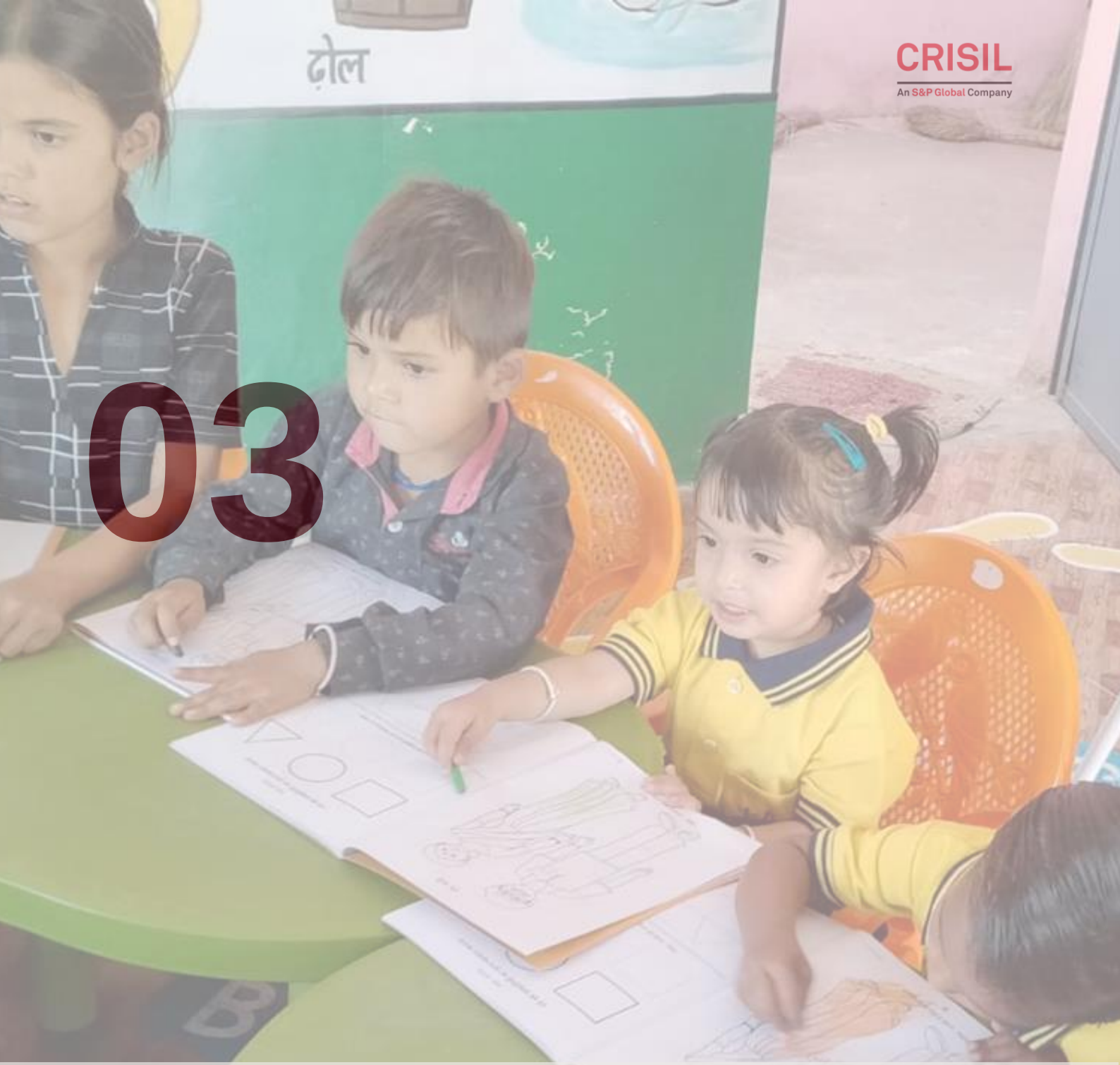
The M&E coordinator, nutritionist and educationist engaged with the block coordinators for on-ground execution of the programme. The block coordinators were managing field teams and ensuring that every AWCs within the study are catered to by the field supervisors. The Damoh grameen block coordinator had 10 field supervisors, and the Tendukheda block coordinator had 4 field supervisors. These field supervisors were the responsibility for grassroot execution of the project. They were trained by the programme management team to counsel the AWWs and support them in achieving the programme outcomes. The supervisors also went door to door of beneficiaries to inform them about nutrition and early education. They also helped in detection of MAM and SAM children.

Every sector, consisting of 25-30 AWCs had one field supervisor. As a result, every field supervisor was able to visit each AWC at least once a month. During the visits, they gauged the prevailing challenges, and assisted the AWWs in their activities through counselling the beneficiaries.

Program outreach

The Damoh block had 306 AWCs and Tendukheda block had 112 AWCs. These AWCs were spread out across 14 sectors. Among these AWCs, 30 were developed as model AWCs (20 in Damoh and 10 in Tendukheda). These model AWCs were meant to inspire the other AWCs to develop and function in similar manner.

#	Block	Sectors	Total AWCs	Model AWCs
1	Damoh Grameen	Aamchopra	26	1
2	Damoh Grameen	Abhana	31	3
3	Damoh Grameen	Bandakpur	33	4
4	Damoh Grameen	Bansa	31	0
5	Damoh Grameen	Hindoriya	37	2
6	Damoh Grameen	Hirdepur	31	2
7	Damoh Grameen	Imaliya Ghat	28	2
8	Damoh Grameen	Palar	31	0
9	Damoh Grameen	Samanna	33	3
10	Damoh Grameen	Tori	25	3
11	Tendukheda	Sarra	24	4
12	Tendukheda	Tejgarh	32	2
13	Tendukheda	Tendukheda 1	29	1
14	Tendukheda	Tendukheda 2	27	2
Total AWCs			**418**	**30**



CRISIL
An S&P Global Company

03

Study Methodology

To conduct the impact evaluation of Aadhar Aangan programme, CRISIL adopted a mixed methods approach which consists of quantitative and qualitative assessments to effectively map the changes and the key explanations for the same. The method is intended to develop the end-to-end structure to ensure that the evaluation goes beyond what change is taking place, by looking at how change happens, what works for whom and in what context.

To shape the study, the evaluation framework is based on the parameters for end-to-end impact assessment provided by the Organization for Economic Cooperation and Development Assistance Committee (OECD DAC) guidelines of Relevance, Coherence, Effectiveness, Efficiency, Impact, And Sustainability. This structure shapes the study in line with critical programme elements.

#	Key Indicators to be mapped under OECD DAC Framework		
Parameter 1- Relevance and Coherence			
1	Need assessment of target community	3	Alignment with government priority
2	Alignment with SDGs		
Parameter 2- Efficiency			
1	Process of documentation	3	Quality of programme staff
2	Developed key performance indicators	4	Involvement of stakeholders
Parameter 3- Effectiveness			
1	Beneficiary awareness	3	Extent of coverage
2	Coverage of marginalized groups	4	Program level effectiveness parameters
Parameter 4- Impact Indicators			
Impact Indicators parameters based on project goals			
Parameter 5- Sustainability			
1	Beneficiary feedback	3	Exit plan/scaling Plan
2	Internal assessments		

Program stakeholders and data collection tools

The data collection consisted of both quantitative (structured survey questionnaires) and qualitative (focused group discussions and key informant interviews) to assess the programme level impact.

The data collection from the identified stakeholders provided valuable insights and information for programme evaluation. The women/mother's questionnaire considers multiple beneficiaries of the programme such as Mothers of kids suffering from Moderate Acute Malnutrition (MAM) and Severe Acute Malnutrition (SAM), pregnant mothers and lactating mothers.

#	Key Stakeholders	Data Collection Tool	Sample
1	Women/Mothers	Structured survey questionnaires,	150
2	Women/Mothers	Focused group discussions	4
3	Women/Mothers	Key Informant Interviews	6
4	Anganwadi workers + Helpers	Key Informant Interviews	30
5	WCD/Health department/ICDS officials	Key Informant Interviews	4
6	Doctors	Key Informant Interviews	4
7	Jan Sahas coordinators	Key Informant Interviews	6-8
8	Jan Sahas stakeholders	Key Informant Interviews	10

Data Collection Locations

Sr.	Block	Sector	GP	Village	Total Data Collection
1	Damoh Grameen	Aamchopra	Aamchopra	Aamchopra	10
2	Damoh Grameen	Hirdepur	Umri	Umri	10
3	Damoh Grameen	Aamchopra	Marutal	Bhairobahar	10
4	Damoh Grameen	Samanna	Karaiya Hajari	Karaiya Hajari	10
5	Damoh Grameen	Imaliya Ghat	Hinouti Ramgarh	Devdongara	10
6	Damoh Grameen	Bansa	Dhangor	Dhangor	10
7	Damoh Grameen	Bandakpur	Pipariya Tikri	Pipariya Tikri	10
8	Damoh Grameen	Hirdepur	Imlai	Imlai	10
9	Damoh Grameen	Palar	Khajri	Khajri	10
10	Damoh Grameen	Hindoriya	Hindoriya	Ward n. -13	10
11	Damoh Grameen	Hindoriya	Aamkheda	Aamkheda	10
11	Tendukheda	Sarra	Sehri	Sehri	8
12	Tendukheda	Tejgarh	Madankeda	Dhoda	8
13	Tendukheda	Tendukheda 1	Ajitpur	Ajitpur	8
14	Tendukheda	Sarra	Dhaneta Mal	OriyaMal	8
15	Tendukheda	Tendukheda 2	Imalidol	Barah	8

The highlighted AWCs are Model AWCS.

04

Study Findings

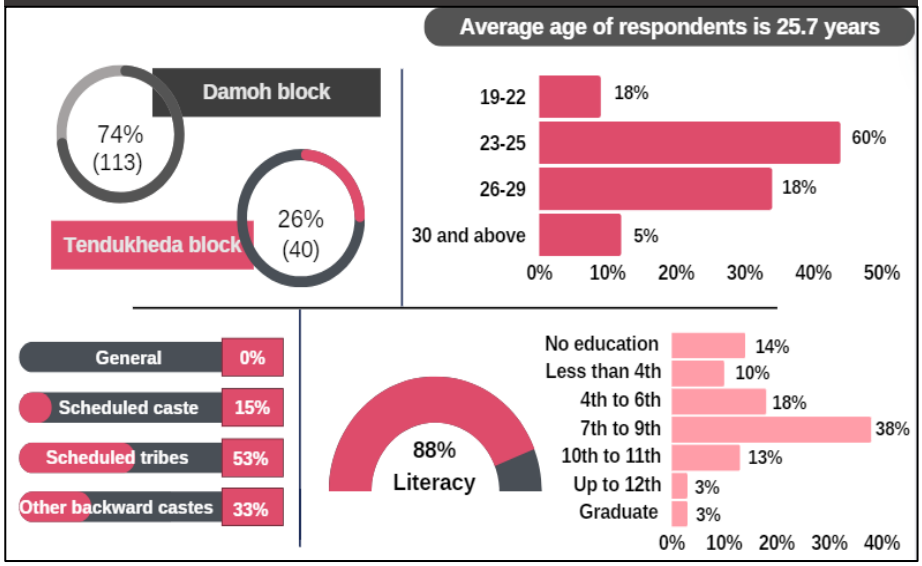
The evaluation covers the end-to-end impact of the Aadhar Aangan programme by mapping its effect on key stakeholders such as pregnant women, lactating mothers, kids with malnutrition, AWWs etc. The study will classify and map the programme benefits and challenges across its each aspect— on AWWs trainings, support to pregnant mothers, support to AWCs, support to kids with malnutrition, linkages towards government schemes etc.

A. Sample demography

"The health of the baby is determined by the nutrition and health of the mother."

Our sample consisted of 150 women, of which 74% were from Damoh Grameen block and 26% were from Tendukheda block. These women were beneficiaries of the programme—and were either pregnant/lactating during the programme period or had their children enrolled in AWCs during the programme period. The average age of respondents was 25.7 years, with around 60% being in the age bracket of 23-25 years, followed by 18% being in the age bracket of 19-22 years and 26-29 years each. Only around 5% are 30 and above in age.

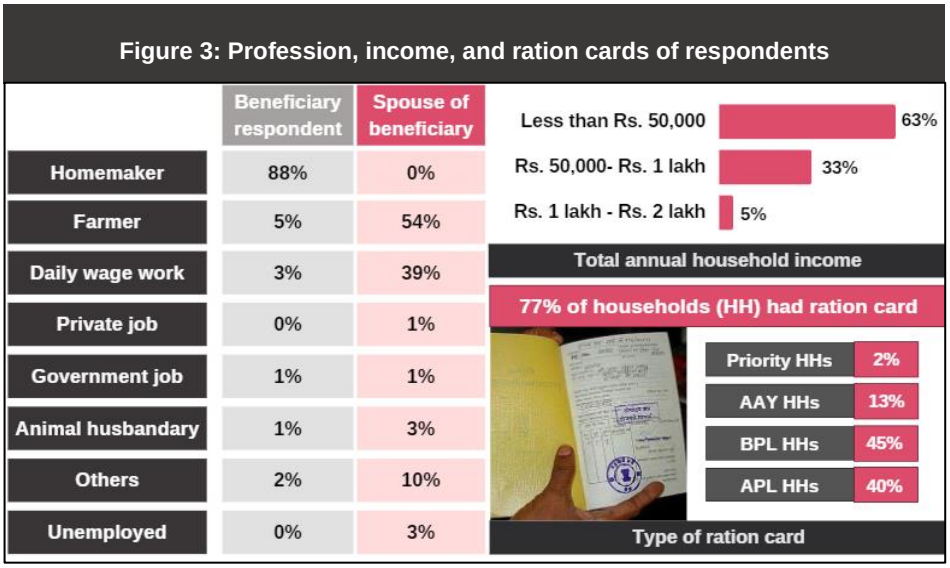
Figure 2: Demography of respondents



The caste spread reveals that all the programme beneficiaries are from marginalized groups, with 53% being scheduled tribes (ST), 33% being other backward castes (OBC) and 15% being from scheduled caste (SC). The literacy level of the respondents was decent at 88%. Approximately 14% of the sample had not received any formal education, while the remaining participants had achieved relatively low levels of education. Only 3% had graduated, and another 3% had completed their studies up to the intermediate level. Most participants (38%) had studied up to 7th to 9th grade.

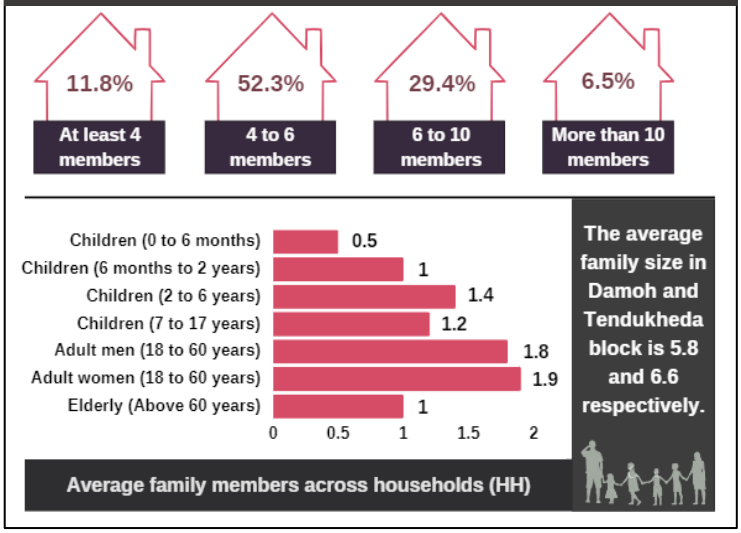
The primary profession of the women, i.e., programme beneficiaries, was homemaker (88%), followed by farming (5%_ and daily wage work (2%). Their spouses, on the other hand, were primarily involved in farming (54%) and daily wage work (39%). Around 10% were also involved in other professions such as driving of cars and trucks. The total annual household income was less than Rs.50,000 for 63% of households. Around 33% earned between Rs.50,000 to Rs. 1,00,000 and only 5% earned

Figure 3: Profession, income, and ration cards of respondents



between Rs. 1,00,000-2,00,000. This highlights that majority of the beneficiaries belonged to low socio-economic backgrounds. This is further highlighted by the te type of ration card the households have—with majority 45% having below poverty line (BPL) cards, 13% having Antyodaya Anna Yojana (AAY), 2% having priority household card (PHH). Around 40% of households, however, had above poverty line (APL) cards.

Figure 4: Household size of respondents



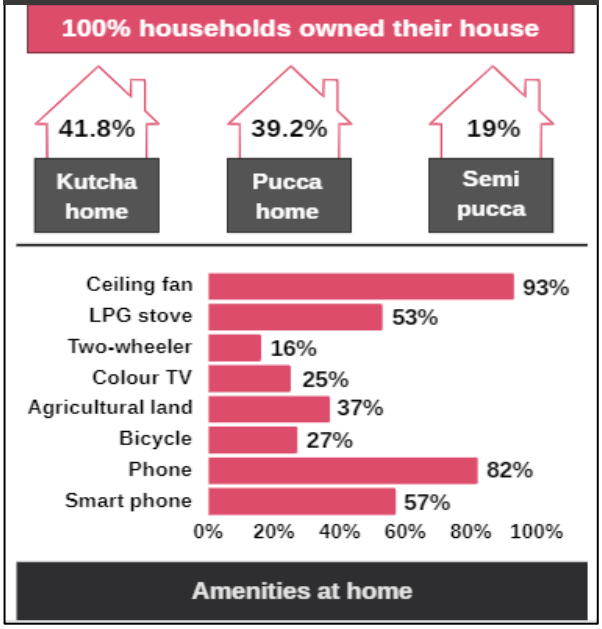
The average family size of households in Damoh block is 5.8 members and in Tendukheda block is 6.6 members. Each household on average has 0.5 infant below 6 months of age, 1 child between 6 months to 2 years of age, 1.4 children between 2 to 6 years of age and 1.2 children between 7 to 17 years of age. This highlights the reason for prevalence of larger families among the respondents. The families also have almost two male (1.8 on average) and two female (1.9 on average) adults in each household and 1 elderly member.

The socio-economic status of households cannot be mapped without understanding the housing the individual lives in, as it is primary indicator of standard of living. Around 100% of the respondents owned their houses, of which 39.2% had Pucca houses[12] , 19% had semi Pucca houses[13] and 41.8% had Katcha[14] houses.

The household also consists of multiple amenities such as electricity connections, fans, TVs, LPG stoves, and other appliances. They are significant indicators for mapping the socio-economic status of the household. Those households which perform better financially tend to have more and higher quality amenities than those households which find it difficult to make ends meet.

Within our sample, Damoh block respondents had 4.06 amenities on average, while the Tendukheda block respondents had 3.5 amenities on average. The maximum number of amenities owned by an HH went up to 8 in Damoh and 6 in Tendukheda. The median was 4 in Damoh and 3.5 in Tendukheda. The households list of amenities is provided in

Figure 5: Household size of respondents



[12] Wall made of burnt bricks, G.I. Sheets or other metal sheets, stone, cement, concrete; Roof made of tiles, slate, iron or metal sheets, cement sheets, burnt bricks, limestone etc.

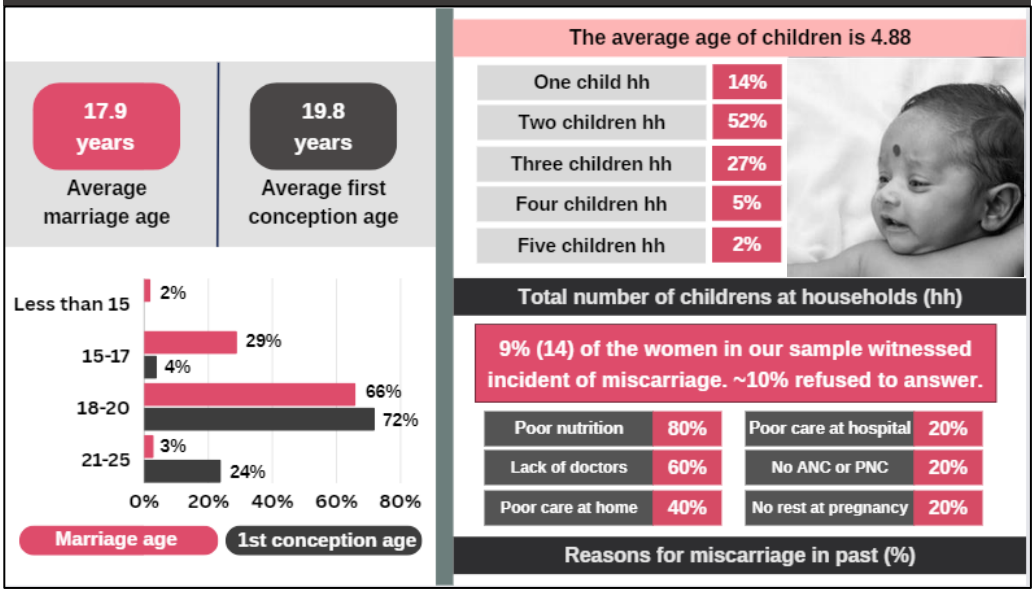
[13] either wall or roof of pucca material

[14] walls made of grass, leaves, reeds, mud etc. and roof of similar materials

figure 5. It shows that majority households own ceiling fan (93%), phone (82% of which 57% own smart phone) and LPG stove (53%).

B. Motherhood details of the sample

Figure 6: Critical Information on women



The average marriage age of women was 17.9 years, and the age of conception was 19.8 years. This reveals that women underwent marriages soon after completing 18 years of age and conceived within a year or two of marriage. Instances of miscarriages were also seen among some women, with 9% of women having experienced it once in their life. They stated that it was primarily due to poor nutrition (80%), lack of doctors (60%) and poor care at home (40%).

The average age of children was 4.8 years. Most women had two children (52%), followed by 27% who had three children and 14% who had one child.

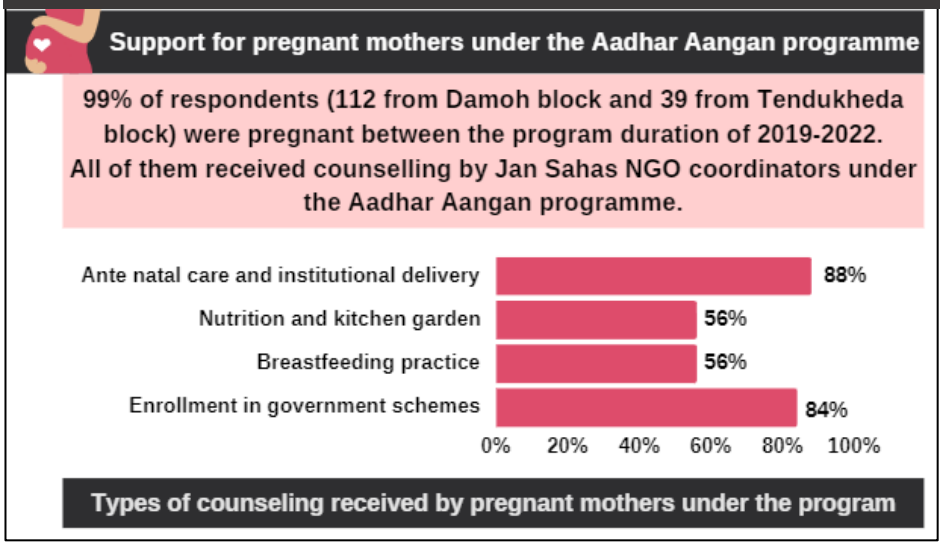
"Since women marry early and conceive within one year, they are weak and lack knowledge on pregnancy. This leads to several issues and challenges during pregnancy."

Mothers focused group discussion, Aamchopra, Damoh, Madhya Pradesh

C. Support for pregnant mothers

Under the Aadhar Aangan programme one of the major components was providing support to pregnant and lactating mothers for nutrition and healthcare concerns. In this section, we intend to understand the extent to which these women were supported during their pregnancy and lactation—and the critical areas of support.

Figure 7: Support for pregnant mothers under the Aadhar Aangan programme



In our sample, 99% of women were pregnant between 2019-2022. All of them received counselling by Jan Sahas NGO coordinators under the Aadhar Aangan programme.

Around 88% received counselling on Ante natal care and institutional delivery, followed by 56% who received counselling on nutrition & kitchen garden and breastfeeding practices.

Around 84% were also enrolled in different maternal focused government schemes through the programme.

In the subsequent sections, we will focus on each of these types of counselling and gauge its impact on pregnant and lactating mothers' well-being.

C.1. Ante natal care and institutional delivery

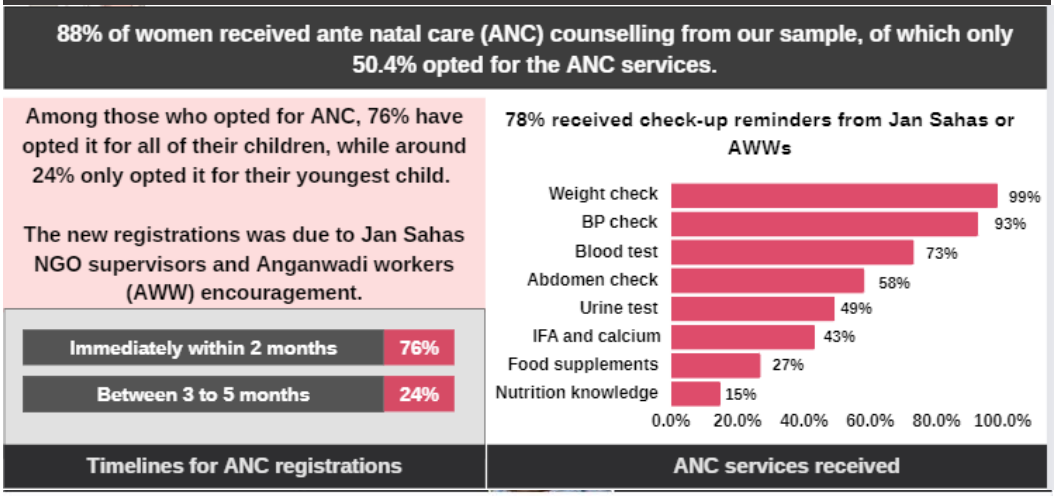
Ante natal care (ANC) is the routine health check-up of pregnant women to diagnose diseases or complicating obstetric conditions without symptoms, and to provide information about lifestyle, pregnancy, and delivery. It is undertaken at nearby primary health centres (PHCs) and pregnant women are expected to be registered during their first trimester. The women are encouraged and supported by AWWs or ASHA (Accredited Social Health Activist) workers to avail ANC under various programmatic areas. However, despite various programmatic interventions by the government of India to promote maternal health, only three in five women complete the conservatively recommended number of ≥ 4 ANC visits during pregnancy, while only one in five women avail adequate quality of ANC services recommended by the WHO for attending a minimum of 8 ANC visits during pregnancy.[15] This is primarily due to lack of knowledge and understanding among mothers, poor healthcare facilities at PHC, and low knowledge and incentives at ASHA/AWWs level.

In consideration of these challenges, the Aadhar Aangan programme provides training to AWWs on ANC requirements of mothers and need for early registrations. Additionally, they also reach out to mothers to counsel them for ANC registrations. The field supervisors also identify high risk women, and provide them with additional care and support, as per their requirements.

[15] Girotra, S., Malik, M., Roy, S. *et al.* Utilization and determinants of adequate quality antenatal care services in India: evidence from the National Family Health Survey (NFHS-5) (2019-21). *BMC Pregnancy Childbirth* **23**, 800 (2023). https://doi.org/10.1186/s12884-023-06117-z

I. Access to ANC

Figure 8: Ante natal care and institutional delivery

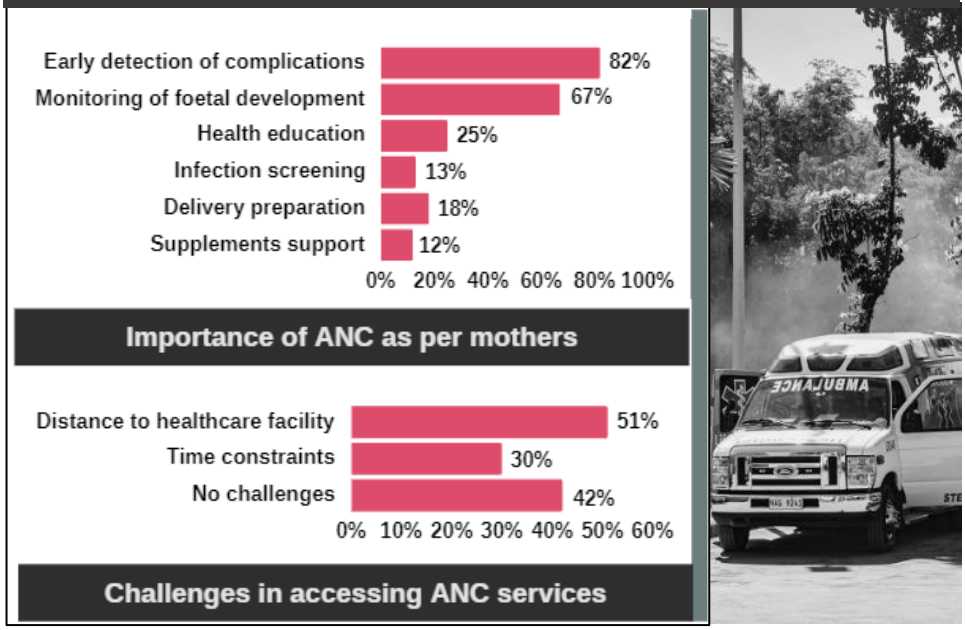


Within our sample, around 88% of women stated that they received ANC counselling from the Jan Sahas supervisors, however, only 50.4% opted for these services.

Among those who opted, around 76% opted it for all of their children, while only 24% opted it for their youngest child. The new registration of 24% of the mothers was due to encouragement of Jan Sahas NGO supervisors and AWWs. Majority of the pregnant mothers (76%) registered themselves timely within 2 months of pregnancy, while the rest 24% registered themselves between 3 to 5 months of pregnancy. The most common services received was weight check, blood pressure check, blood check, abdomen check, etc. Only 15% received nutrition knowledge under ANC—however, it was extensively promoted by the Jan Sahas NGO supervisors under the programme.

The frequency of visits was quite low among the respondents, with around 3% of women visiting only once, 78% of women visiting twice and 19% of women visiting three times. The WHO guidelines recommend a minimum of 8 visits prior to delivery, while National Health Mission under Ministry of health and family welfare (MoHFW) recommends at least 4 visits prior to delivery.

Figure 9: Perception on importance of ANC and challenges in accessing ANC



The low frequency could be due to lack of knowledge around number of visits or challenges in accessing ANC services such as distance to healthcare facilities (51%) and time constraints (30%), since the mothers fairly acknowledged the importance of ANC services.

Around 82% stated that ANC can help to detect pregnancy complications early and 62% stated that it helps to monitor the foetal development of the baby. Some of the mothers also acknowledged that it provided health education (25%), infection screening (13%),

"ANC has really helped track mothers' health and vitals; this helps in identifying the risky areas and providing requisite solutions. Earlier the mothers would deliver in a weak state, and thereby, the babies would also be extremely fragile and weak."

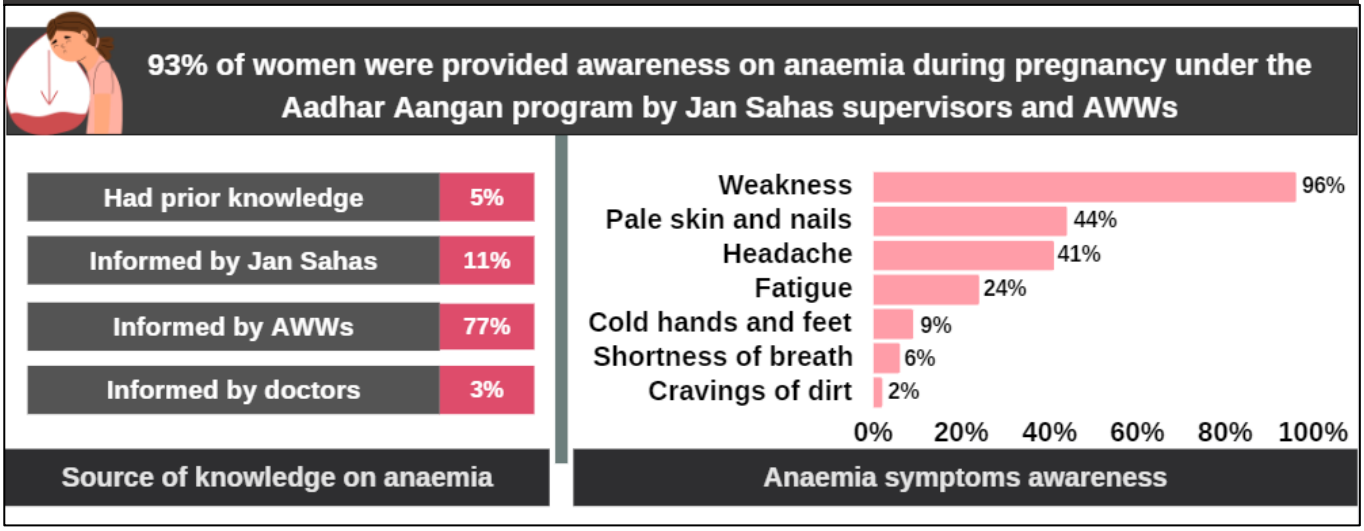
Babita Shyamkali
Beneficiary, Kariyahjari, Damoh

II. Anaemia knowledge and screening

During pregnancy, the body tends to produce more blood to support the growth of the baby. However, it requires necessary ingredients, primary iron, vitamin B12 and folate, to support blood production. In any case, if the body lacks these, the mothers can have issues of anaemia, wherein, they are likely to feel tired and weak. In severe cases, it can also lead to serious complications such as preterm delivery. Despite this issue, females in their reproductive age group are highly susceptible to anaemia due to poor nutrition in-take, which puts them at considerable risk during pregnancy. Considering these challenges, under the programme, anaemia awareness was undertaken.

Within our sample, 93% of women were provided awareness on anaemia within the programme. Around 77% stated that they got to know about anaemia through the AWWs, 11% got to know through Jan Sahas NGO, while 5% had prior knowledge and 3% were informed by doctors. The women were also aware of some of the anaemia symptoms such as weakness (96%), pale skin and nails (44%), headache (41%) and fatigue (24%). Only few women stated cold hands and feet, shortness of breath and cravings of dirt as critical symptoms.

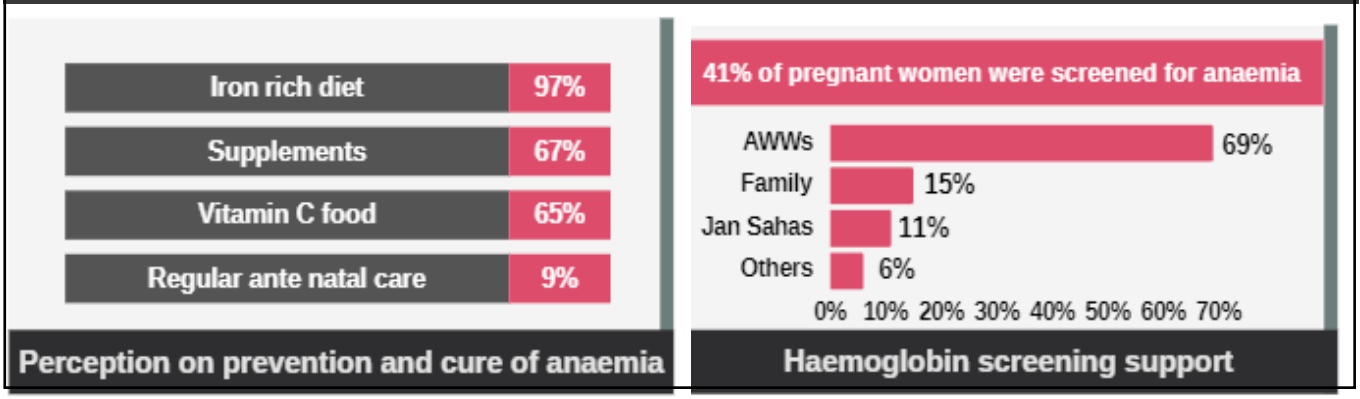
Figure 10: Anaemia knowledge



The women also had some perception on prevention and cure of anaemia, with 97% stating the need of an iron rich diet, 67% stating the need for supplements, and 65% stating need of vitamin C food.

Around 41% of women in our sample underwent anaemia screening. It was primarily supported by AWWs (69%), family members (15%), Jan Sahas supervisors (11%) and others, such as Auxiliary Nurse and Midwife (ANM).

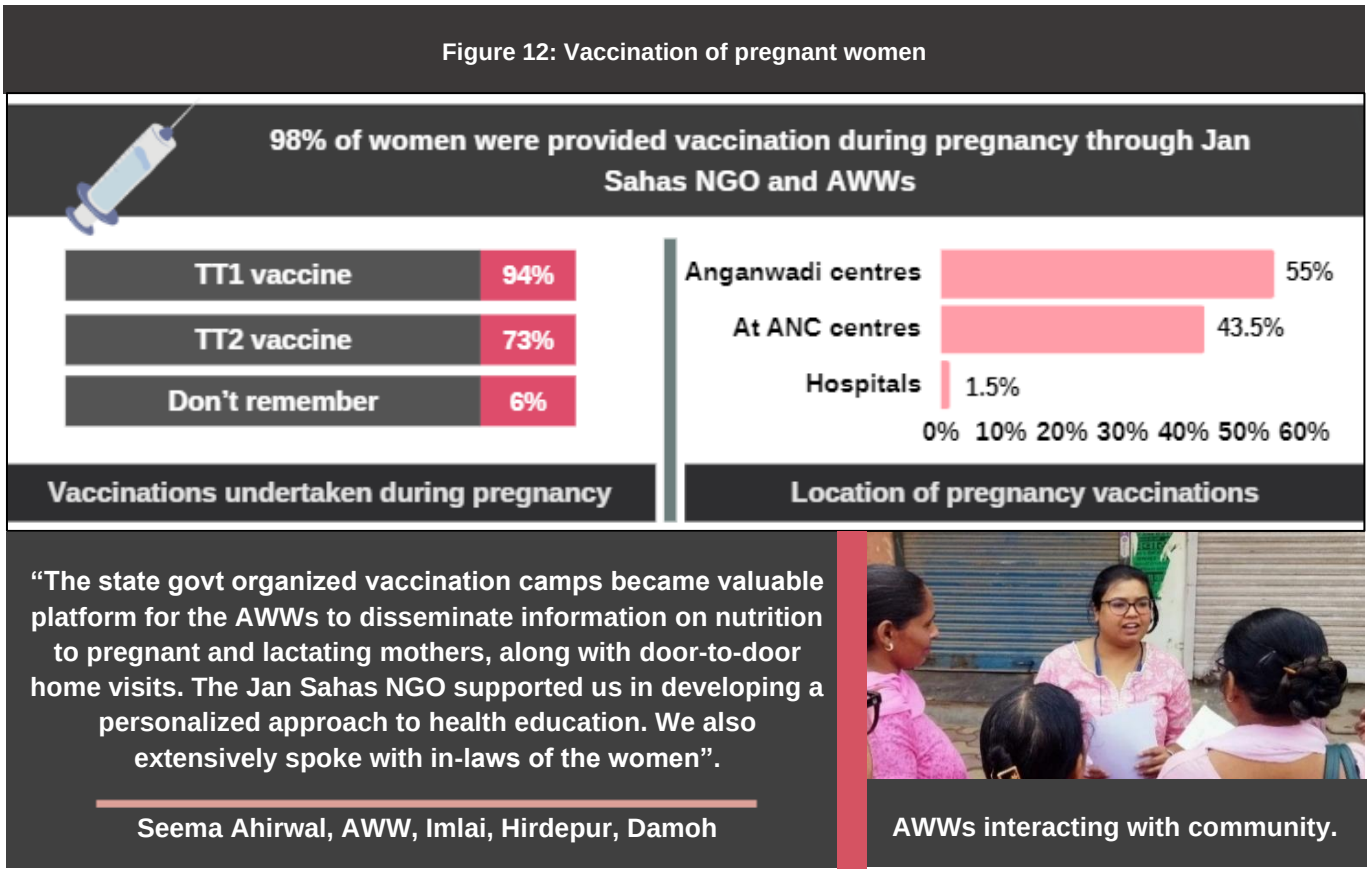
Figure 11: Perception on prevention/cure of anaemia and haemoglobin screening support



III. Vaccination of pregnant women

In discussion of health of pregnant mothers, vaccination plays an instrumental role to safeguard them from numerous diseases. In our sample, 98% of pregnant women were provided vaccination during pregnancy. Around 94% took TT1 vaccine, 73% took TT2 vaccine and 6% didn't remember the names of the vaccine taken. Majority of the women took vaccines at the Anganwadi centres (55%), followed by 43.5% who took it at ANC centres and 1.5% who took it at hospitals. As per the respondents, the most prevalent reasons factor immunization was disease protection followed by health of mother and children.

Figure 12: Vaccination of pregnant women



"The state govt organized vaccination camps became valuable platform for the AWWs to disseminate information on nutrition to pregnant and lactating mothers, along with door-to-door home visits. The Jan Sahas NGO supported us in developing a personalized approach to health education. We also extensively spoke with in-laws of the women".

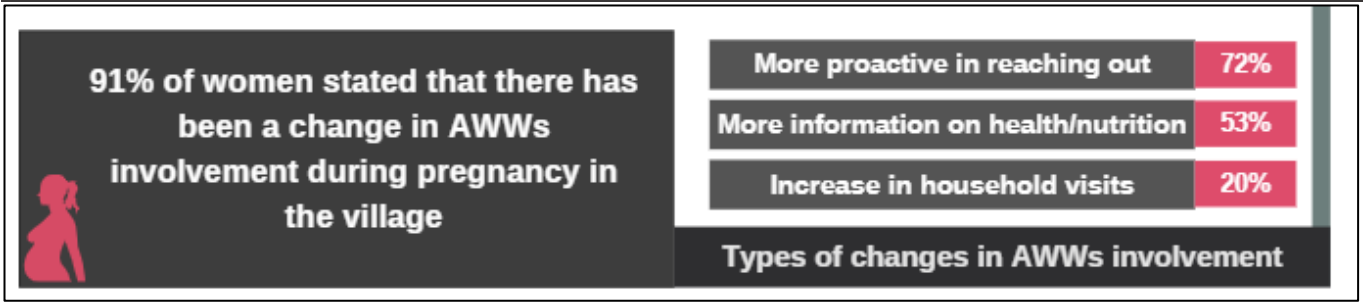
Seema Ahirwal, AWW, Imlai, Hirdepur, Damoh

AWWs interacting with community.

IV. Changes in involvement of AWWs during pregnancy

Based on the above areas of intervention, the mothers were enquired if they thought there has been a change in AWWs involved during pregnancy in the village and around 91% answered affirmatively. When probed on the types of changes, around 72% stated that they are more proactive in reaching out, 53% stated that they provide more information on health and nutrition and 20% stated that the number of household visits by AWWs has increased.

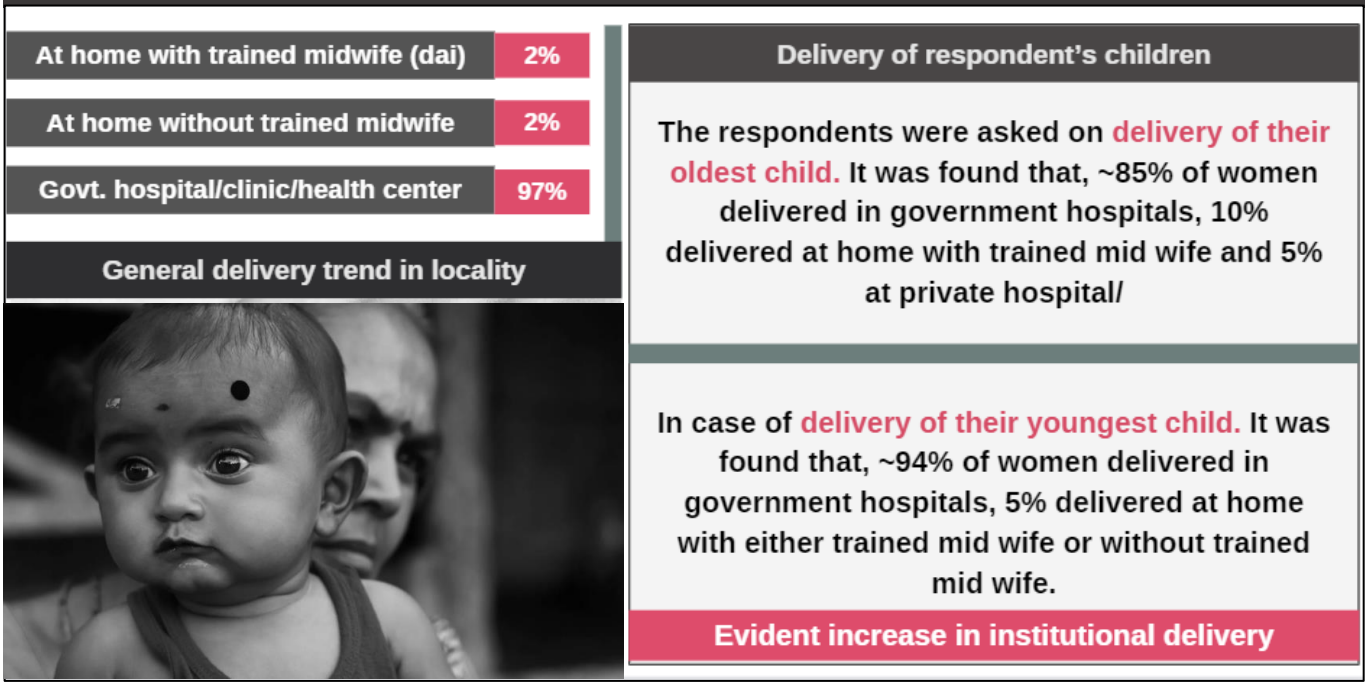
Figure 13: Involvement of AWWs during pregnancy



V. Institutional delivery

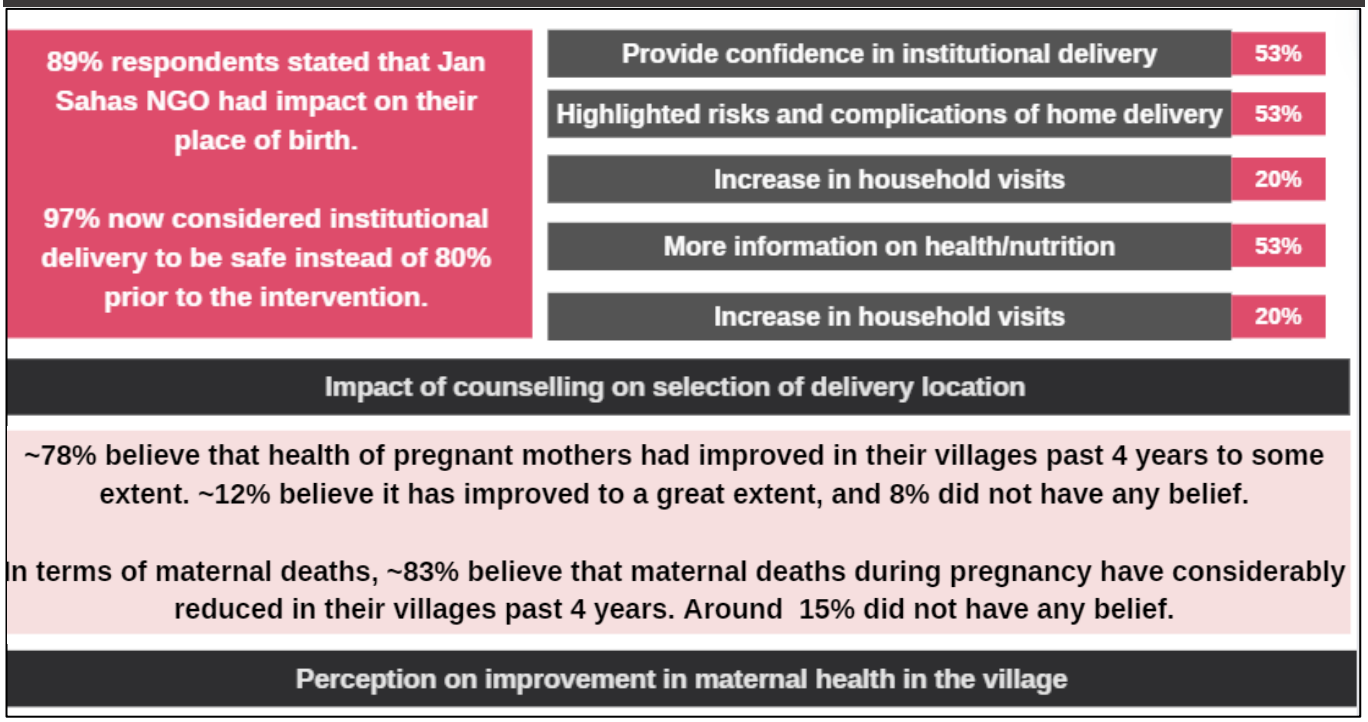
Within our sample, 97% of sample stated that the general delivery trend in their village/locality was in government hospitals and health centres. The study further found out that around 85% of the women delivered their oldest child in the government hospitals, however, this number was increased to 94% during delivery of their youngest child. This shows an evident increase in institutional delivery among respondents.

Figure 14: Institutional delivery among respondents



The respondents clearly believed that the programme had an impact on institutional delivery, with 89% stating that Jan Sahas NGO supervisors had counselled them on the place of birth. Around 97% now considered institutional delivery to be safe instead of 80% prior to the intervention. Majority of women (53%) stated that the NGO had assisted them by providing confidence in institutional delivery, highlighted risks and complications of home delivery and provided more information on health and nutrition.

Figure 15: Program impact on maternal health and institutional delivery



Overall, the programme had a positive impact as majority (90%) of the women believed that the health of the pregnant women had improved in the village some extent (78%) or great extent (12%). Additionally, 83% also believed that maternal deaths have also decreased in their village considerably past 4 years. However, in perception-based analysis, it is advised to take the results cautiously without further checks.

"The community is now ready to go to the hospitals, earlier they were extremely scared and avoided visits even in cases of emergency. We are now able to take them at least 3 to 4 times prior to delivery. All this was possible due to Jan Sahas NGO's training sessions on mother's health and counselling strategies".

Parvati Patel, Anganwadi worker, Umri, Hirdepur, Damoh Grameen

C.2. Nutrition and kitchen garden development

The Aadhar Aangan programmes another important area of focus was complete nutrition for for the pregnant women and lactating mothers and children within six years of age. The two major objectives of this programme were awareness and access,

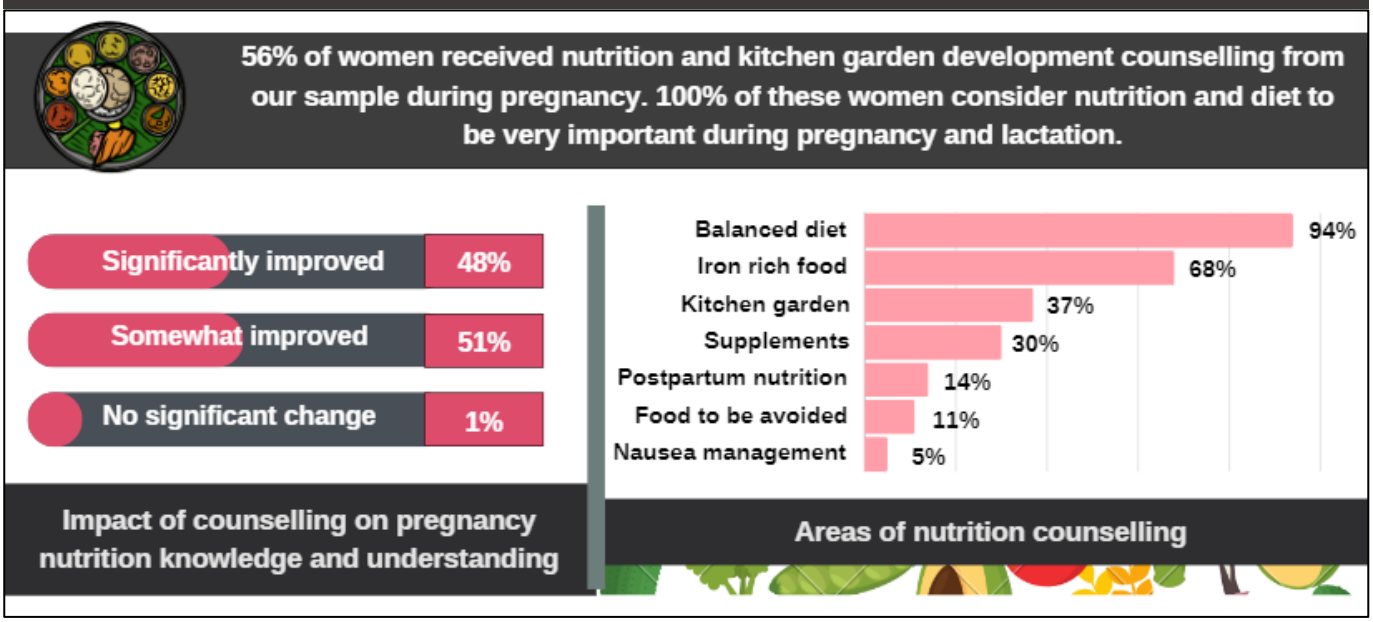
Objective 1- To provide awareness on nutritious food during pregnancy and post childbirth.

Objective 2- To provide access to these nutritious foods through locally grown vegetables, cereals, grains and lentils.

Within the first objective, the programme has undertaken myriads of initiative which provides information on healthy foodstuff and recipes through activities such as Poshan Mela. The second objective is addressed through the kitchen garden initiative, wherein the households were counselled on growing their own fruits and vegetables in their house through a kitchen garden. Some of the beneficiaries were also provided seeds. In addition, the model AWCs had been provided with nutrition gardens for growing vegetables for pregnant women and high-risk children.

Within our sample, only around 56% of women received nutrition and kitchen garden counselling during pregnancy, and all of them considered nutrition and diet to be very important during pregnancy. When they were enquired on impact of counselling on pregnancy nutrition knowledge and understanding, around 48% stated that it had significantly improved and 51% stated that it had somewhat improved. They were counselled on need of balanced diet (94%), need of iron rich food (68%), kitchen garden development (38%), postpartum nutrition (11%), food which are to be avoided during pregnancy (!1%) and nausea management (5%). Most women believed that their nutrition needs are different than that of women who are not pregnant. They stated that raising a child requires more iron rich food, vitamins, and supplements, along with balanced intake of proteins, carbohydrates, and fibres. The women also highlighted the need to eat nutritious food to maintain energy levels such as green leady vegetables, fruits, daliya, sprouts, eggs, fenugreek seeds, pulses, etc.

Figure 16: Nutrition and kitchen garden counselling

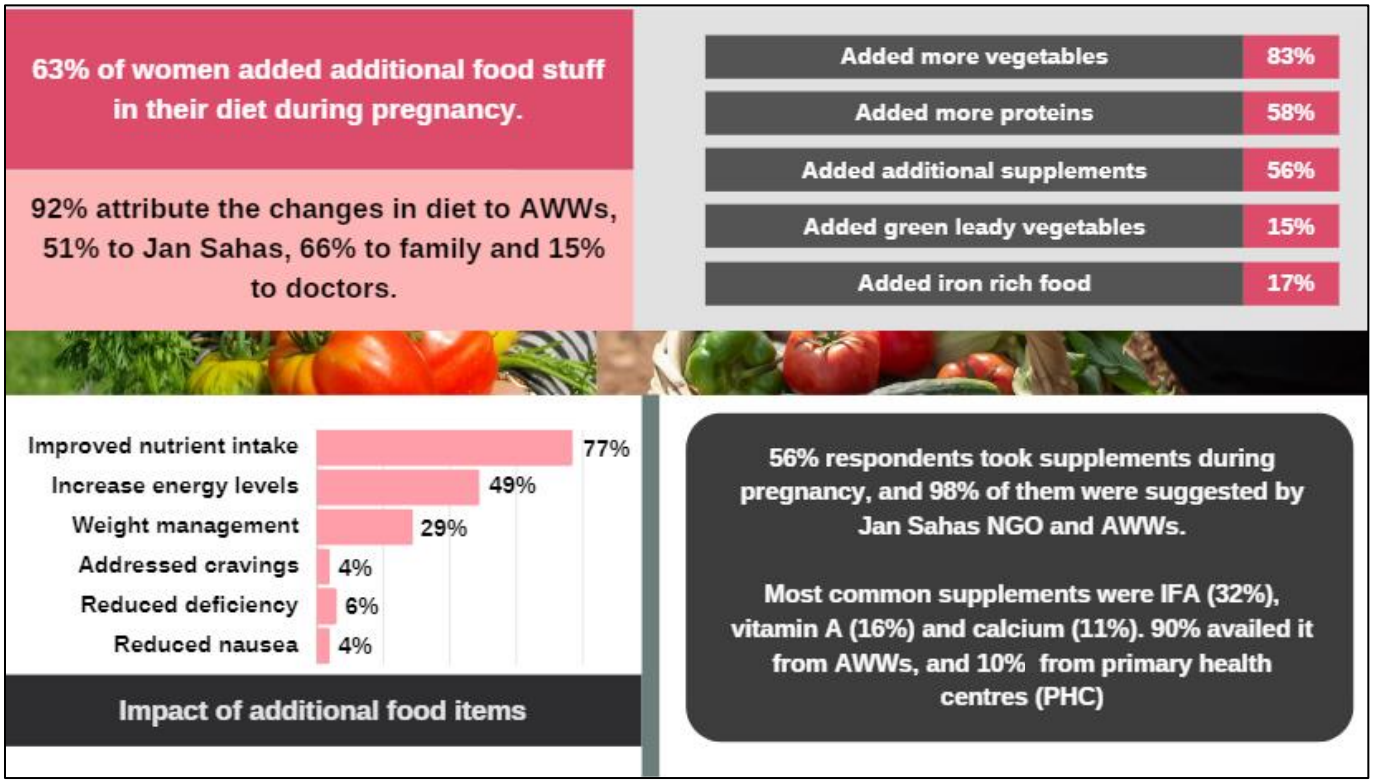


In the case of lactation, the mothers stated that they are aware of the nutritional needs for breast feeding. When asked to elaborate, several of the women stated that mothers require complete balanced nutrition to provide nutrition

to the baby and in case of any inadequacy, both the quantity and quality of milk is affected. Apart from sufficient calorie intake, the mother's diet should focus on adequate protein through consumption of milk, paneer, egg, pulses etc. This will ensure production of breast milk with adequate proportion of milk protein. Another important nutrient is calcium, for which the mothers should consume ragi, fenugreek leaves, radish leaves, tamarind etc. The mothers should also ensure adequate intake of vitamins and iron. These vitamins are then absorbed in the breast milk for the child's growth.

As a result, 63% of women added additional food stuff in their diet during pregnancy. Of which, around 83% added more vegetables in their diet, followed by 58% who added more proteins, and around 15 to 17% added additional supplements, green leafy vegetables, and iron rich food in their diet. Most women attributed the changes in their diet to AWWs (92%) and Jan Sahas supervisors (51%). The involvement of family on diet choices was also substantially high at 66%.

Figure 17: Additional foodstuff in diet due to counselling



The additional food items positively impacted the pregnant mother's health with improvement in nutrition intake as suggested by 77%, increase in energy levels (49%) and weight management (29%).

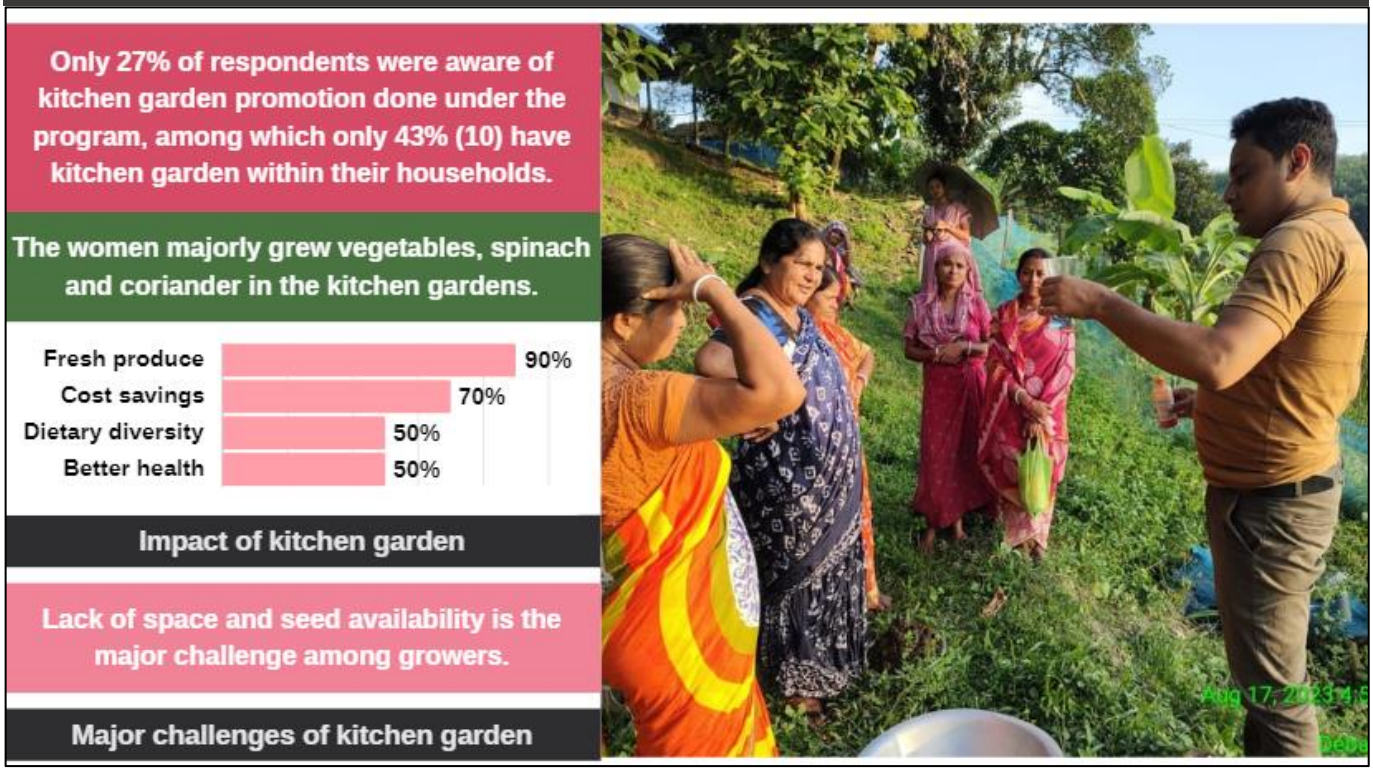
The programme also encouraged mothers to take certain supplements during pregnancy to reduce the risk of Anaemia related pregnancy challenges. Among our respondents, 56% of pregnant mothers took supplements. Most pregnant mothers took Iron and Folic Acid (IFA) tablets, followed by Vitamin A and calcium tablets. 90% of respondents availed the supplementary nutrition majorly from AWWs. The rest got it from PHCs during ANC visits.

Another important element during nutrition counselling was on development of kitchen garden, wherein the intention was to provide access to these nutritious foods through locally grown vegetables, cereals, grains and lentils. The women of the community were counselled to grow fruits, vegetables, or lentils in the backyard, to diversify nutrition and to ensure meals during lean or summer seasons.

Within are sample, only around 27% of respondents were aware of the kitchen garden promotion done under the programme, of which only 43% had kitchen garden within their households. The major crops grown were vegetables, spinach, and coriander. The major impact was availability of fresh produce; however, the major challenge was lack of space and seed availability.

The focused group discussions with women revealed that several of the women had not used the seeds distributed in the programme, as most of them didn't have time to cater their own garden during pregnancy and childcare.

Figure 18: Kitchen garden development



In addition, the Jan Sahas supervisors under the programme had developed community nutrition gardens at model AWCs. Out of 5 model AWCs, 3 had developed community nutrition gardens during the programme tenure. The other reported non-development due to space and land shortage. Around 2 AWCs mentioned that they distributed the garden produce to pregnant and lactating mothers during the programme tenure. The other AWC mentioned that the products were used by the villagers and themselves.

Currently, no nutrition gardens are operating on the field.

When AWWs were enquired on reasons for non-operation of the gardens, they stated that it was tedious to maintain, and they didn't have time to cater to the garden needs. They also found it difficult to distribute the produce. However, they did provide images of the nutrition gardens from the time of inception, which barely has any crops or produce.

C.3. Breastfeeding practices

Counselling on breastfeeding practices for pregnant and lactating mothers is crucial for several reasons. It helps to provide them essential information and support, helping them make informed decisions about breastfeeding. This guidance addresses potential challenges, promotes techniques, and emphasizes numerous health benefits for both mother and infants. It also fosters a supportive environment, contributing to the overall well-being of young mothers.

Figure 19: Breastfeeding practices

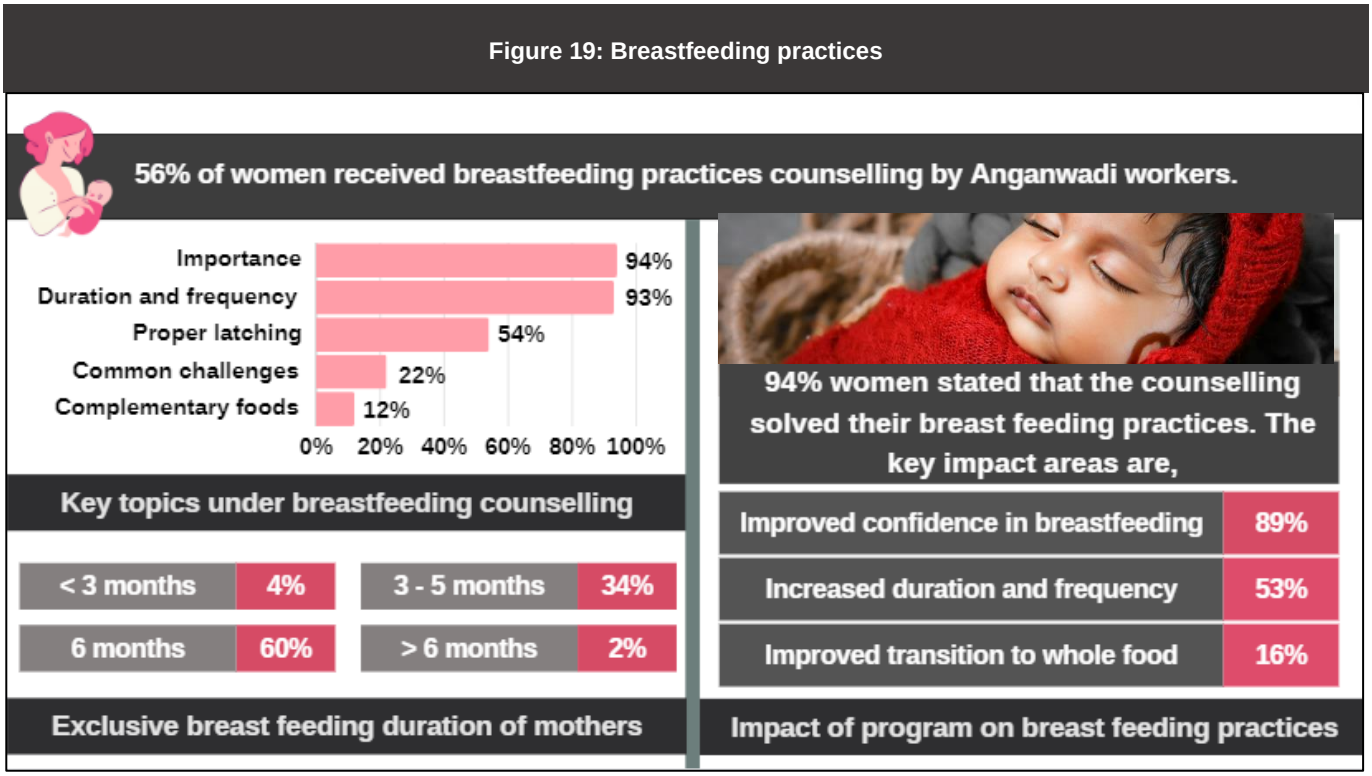


Figure 20: Supplementary feeding practices

< 3 months	4%
6 months	60%
3 - 5 months	34%
> 6 months	2%
> 6 months	2%

Intoduction of supplementary food in child's diet

Within our sample, around 56% of women received breastfeeding practices counselling by the AWWs. The key topics covered were importance of breast feeding (94%), duration and frequency of breast feeding (54%), proper latching techniques (54%), common challenges (22%) and timings of complementary foods (12%). As a result, it was found that majority of mothers (60%) exclusively breast fed till their babies were 6 months of age. However, around 34% fed them between 3-5 months of age and 4% also fed them less than 3 months of age.

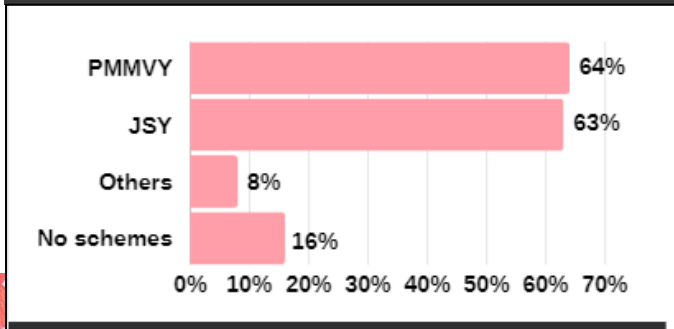
94% of women were satisfied with the counselling and stated that it solved their breastfeeding concerns and challenges. Around 89% stated that it increased their confidence in breast feeding, 53% stated that it helped them increase the duration and frequency of breast feeding and 16% stated that it helped to smoothly transition their babies to whole foods.

C.3. Enrolment in government schemes

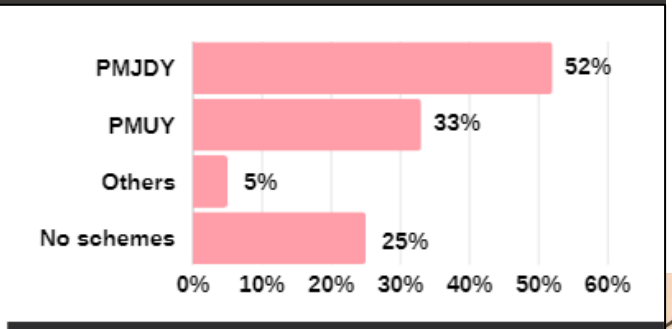
Within the counselling sessions, the Jan Sahas supervisors also helped the women to enrol into government schemes—both maternal and general.

The most common maternal scheme was Pradhan Mantri Matru Vandana Yojana (PMMVY) (64%), Janani Suraksha Yojana (JSY) (63%), Laadli Behna Yojana (5%), and Janani Shishu Suraksha Karyakaram (JSSK) (3%). The other schemes were Pradhan Mantri Jan Dhan Yojana (PMJDY) (52%), Pradhan Mantri Ujjwala Yojana (PMUY) (33%) and others (5%). Several beneficiaries were still not enrolled in any schemes.

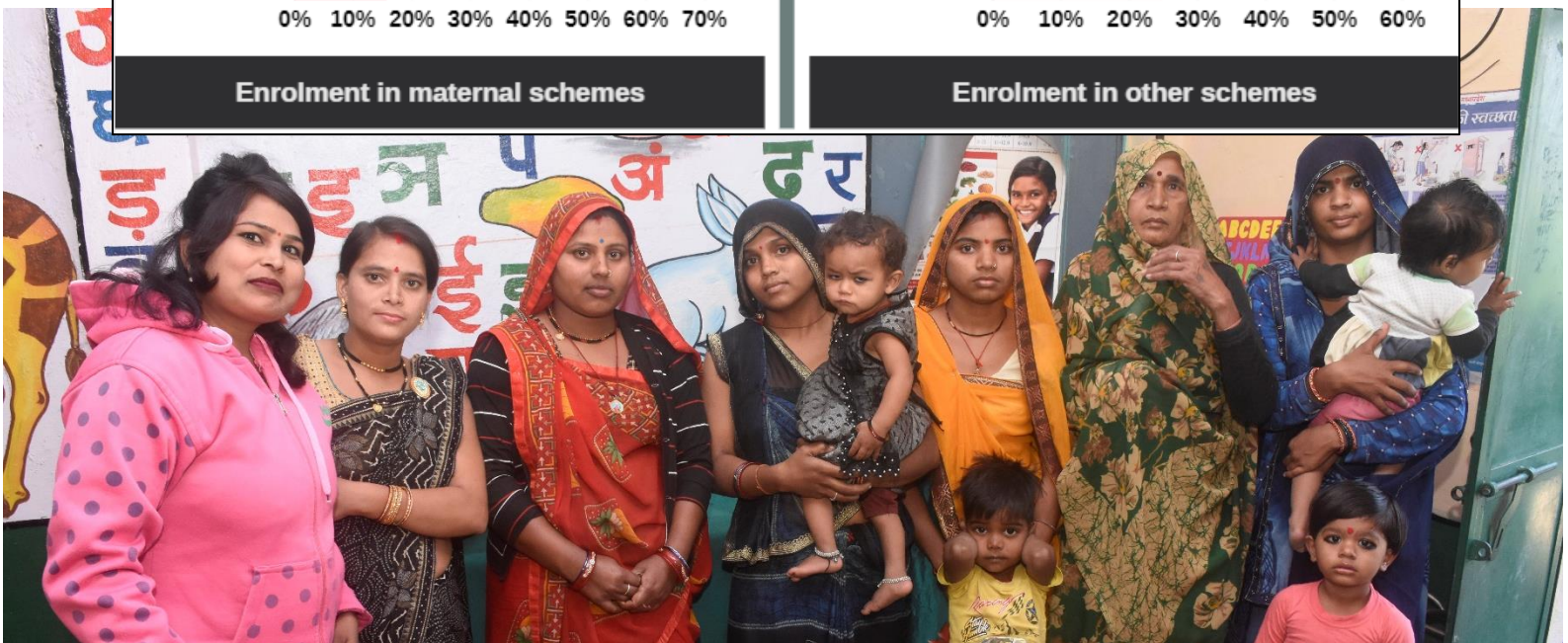
Figure 21: Enrolment in government schemes



Enrolment in maternal schemes



Enrolment in other schemes



D. Support for Anganwadi Centres

Under the Aadhar Aangan programme, several initiatives were undertaken to strengthen the Anganwadi centres through development of infrastructure at model AWCs and education counselling for all AWWs. In this section, we intend to understand the extent to which these AWCs were developed.

Enrollment of children in Anganwadi centres (AWC)

92% of respondents (105 from Damoh block and 35 from Tendukheda block) enrolled their children in nearby anganwadi centres during the program duration of 2019-2022.

Around 96% were encouraged by AWWs to join the AWC

D.1. Infrastructure changes in AWCs

The school infrastructure was developed under the programme considering that it has substantial effect of learning through improved learning environment. Several studies have found that if early learning or primary schools fall short of expectations with teachers, staff, and students often having to work in buildings with poor infrastructure, the education priority declines substantially.

The evidence states that an optimal physical environment should not be uncomfortable, alienating, or either chaotic or boring for students. It highlights that many of the factors relevant for ensuring a healthy environment are important for learning such as strong structures and ventilations but also additional factors like choices about decoration, furniture's, fittings, wall paintings, designs, and space usages.

The world bank group conducted a synthesis of evidence to map the impact of school infrastructure on learning. Through this exercise they were able to identify the most crucial infrastructures, necessary for boosting learning outcomes among students. [16]

As per the WBG study, these key school infrastructures positively contribute to students' academic outcomes:

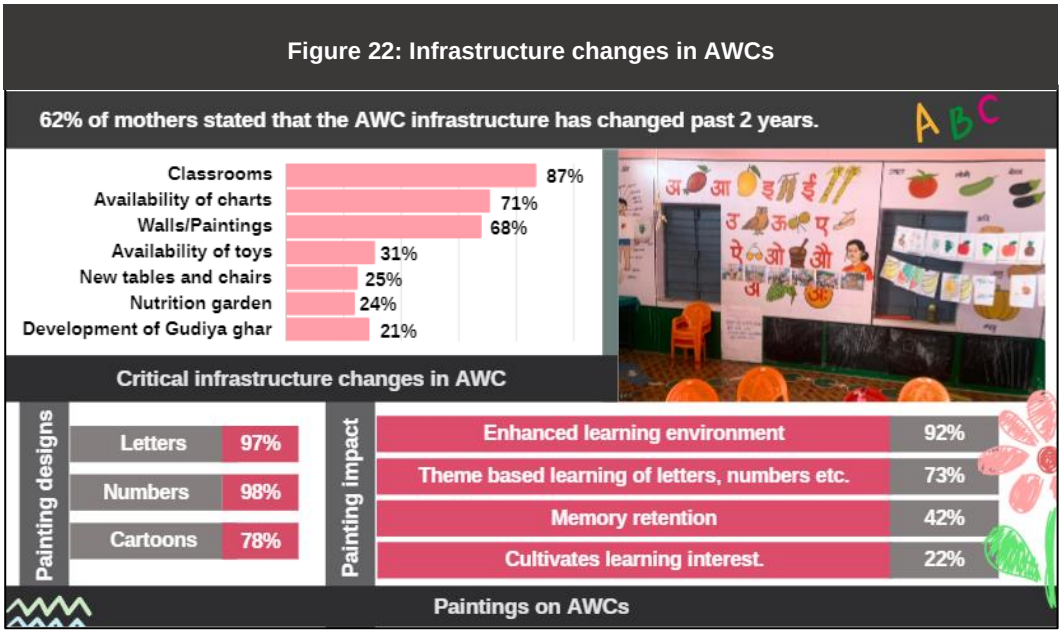
- ✓ **Good "natural" conditions such as lighting, air quality, temperature, and links to nature**
- ✓ **Age-appropriate learning spaces that offer flexible learning opportunities for students to adapt and personalize.**
- ✓ **Connections between learning spaces that are easy to navigate and that may provide additional learning opportunities.**
- ✓ **Stimulation using colour and visual complexity.**
- ✓ **Schools that are designed from the inside out (classroom to school) so that each space meets the needs of its inhabitants.**
- ✓ **Designs that consider local climatic and cultural conditions.**

[16] Barrett, P., Alberto T, et al., The Impact of School Infrastructure on Learning, A Synthesis of the Evidence, World Bank Group

In consideration of the same, under the Aadhar Aangan programme, 30 AWCs were supported with infrastructure development. The random visits to 5 of these AWCs exhibited that they have improved infrastructure, including children's chairs and tables, paintings, and theme-based learning corners.

These model AWCs were developed to inspire the other AWCs and provide a role model for development. The selection of these model AWCs was also strategic with at least one model AWC being developed in each sector (consisting of 25-30 AWCs). As a result, we enquire on changes in infrastructure to all mothers across AWCs—to consider overall changes in the infrastructure of programme AWCs.

Figure 22: Infrastructure changes in AWCs



Within our sample, 62% of mothers stated that AWC infrastructure has changed in the past 2

years. Among which, 87% found changes in classrooms, 71% witnessed increase in the availability of charts, 68% found changes in wall paintings. Some AWCs had new toys (31%), new tables (25%), nutrition garden (24%) and gudiya ghars (21%).

When the mothers were enquired about designs in wall paints—97% stated that they had letters and 98% stated that they had numbers. Around 78% also said it had cartoons. They felt that it will help to enhance the learning environment (92%) and positively impact the learning of letters, numbers, etc. (92%). Around 42% believed that it helps memory retention and 22% believed that it cultivates learning interests.

The gudiya ghars were built under the programme at some AWCs to provide a separate space for children who are not interested to sit in AWC, so that AWWs can get chance to focus on children who belong to small group. It is useful for providing tailored learning environments, improved teacher child interaction, and self-paced learning.

Within our sample, around 9 AWCs were said to have gudiya ghars developed under the programme. However, visits to the AWCs did not find any such space or structure. AWWs reported that it was a temporary development and was later demolished due to election booth requirements. Some parents were aware, while most were not informed about gudiya ghars.

"The informative painting in classrooms catalyzes the children's learning of letters and numbers. Their recognition improves greatly".

Bebi Khare, AWW, Sehri, Tendukheda

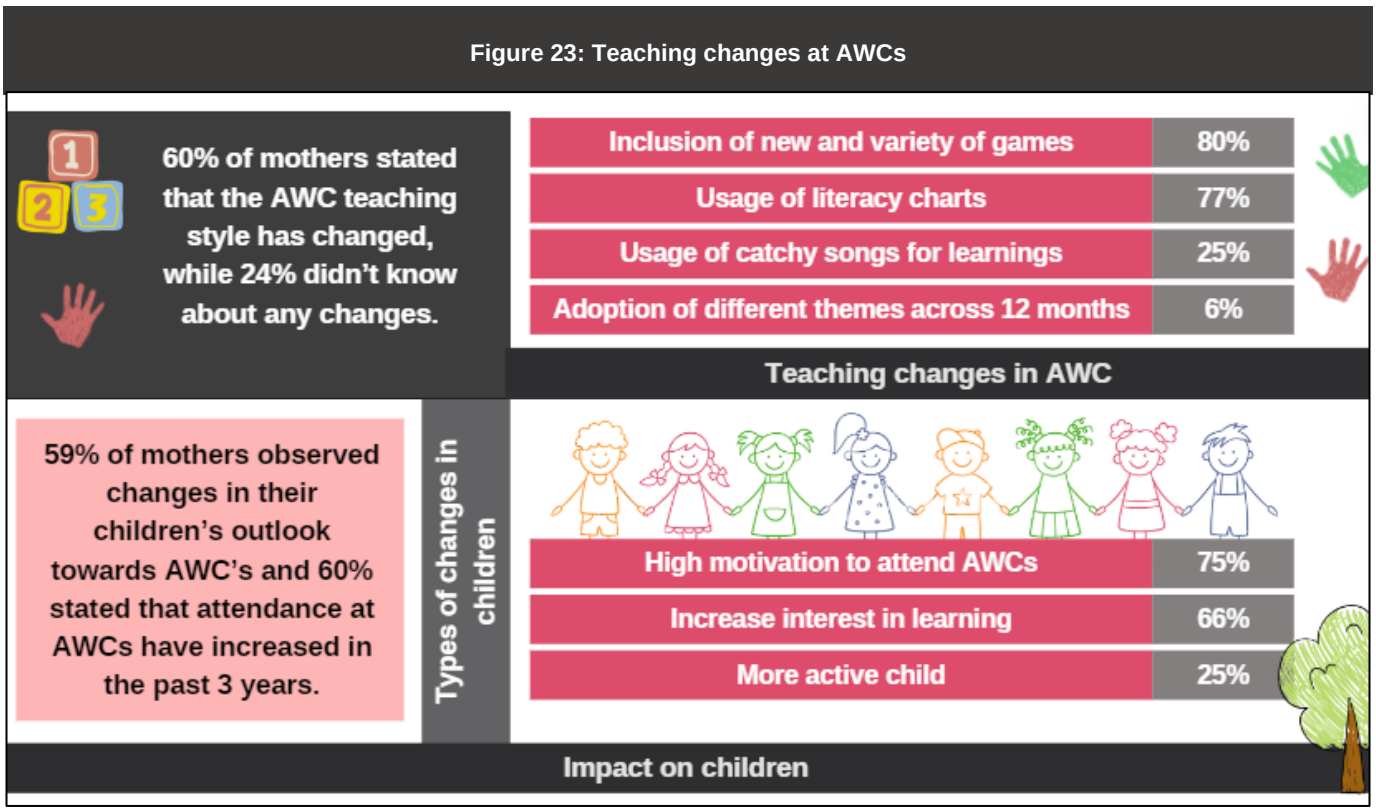
D.1. Teaching changes in AWCs

The AWWs were trained on early child learning techniques. Additionally, there were also provided curriculums under the programme each month on various thematic areas to teach the children interactively. The goal was to facilitate strong early learning and encourage teacher-child interactions.

When the mothers were enquired on teaching changes, around 60% stated that AWC teaching style has changed, while 24% didn't know about any changes. The rest stated that nothing has changed. On asking about types of changes in teaching, 80% stated that the AWWs included new and variety of games during learning, 77% stated that literacy charts are used, 25% stated use of catchy sings for teaching. Only 6% of mothers were aware about different thematic areas of education each month.

These changes led to increased motivation among children to attend AWCs (75%), increased their interest in learning (66%) and led to a more active child (25%). The mothers also observed any increase in attendance of AWCs in the past 4 years.

Figure 23: Teaching changes at AWCs



"Earlier when my son said that he does not want to go to the AWC, I would agree considering the challenges he has to face in the environment, but now, I feel confident that he will learn something there and be involved with his peers. It should help him for school in the coming year."

Ekta Sahu, Mother of child from Hindoria AWC

E. Malnutrition detection by AWCs

AWCs play a pivotal role in addressing malnutrition, primarily through early detection and intervention. The need for their involvement arises from their community centric positioning, facilitating regular health check-ups and nutrition support. However, fulfilling this role requires several key requirements,

- ✓ **Training:** AWWs and helpers need training to effectively identify the signs of malnutrition, understand nutritional needs and provide appropriate guidance.
- ✓ **Infrastructure:** Adequate infrastructure and resources, including weighing scales, growth monitoring tools, and nutritional supplements are essential for comprehensive assessments.
- ✓ **Collaborations:** Coordination with healthcare professionals and local health department is crucial for accurate diagnosis and referral of severe cases.

The Adhaar Aangan programme supports the AWCs on all the above aspects. The programme field supervisors help AWWs centres to detect malnutrition using series of tests recommended by UNICEF such as calculation of mid upper arm circumference (MUAC) z- scores[17], edema identification (pressing on feet for few seconds to check if a dent is visible) and reliable weighing scale.

Prior to the initiative, the AWWs were testing children on the basis of a Vriddhi chart provided by the Ministry of Women and Child Development (WCD), which takes into account only the age, weight and height of the child. Additionally, the AWWs were also using hanging scales, which led to difference in weights up to 500-600 grams, which is critical for identification of SAM kids.

Measuring infant's weight and height

"We received extensive support from Jan Sahas field's supervisor in detecting malnutrition among children. They guided us on edema testing and tracking MUAC-z scores. Previously, relying on the vridhi scale and our weighing machines, we used to refer the children to Nutrition Rehabilitation Centre (NRC). However, in certain cases, the children did not fall into the SAM category due to a 500-700 grams difference in weight and were sent back home. This led to certain level of distrust among parents, making it extremely difficult to their children to NRC.

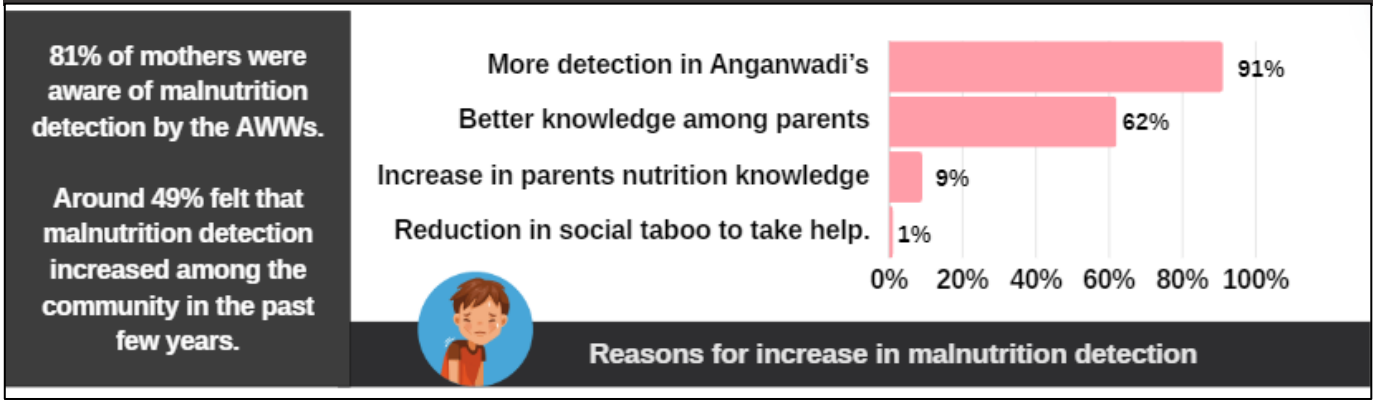
Varsha Patel, AWW, Oriyamal, Tendukheda

[17] MUAC z-score is a vital metric in pediatric nutrition assessment especially for identifying kids with severe acute malnutrition. The score is compared with a reference population and helps gauge the child's nutrition status relative to ports.

E.1. Malnutrition detection and support from the perspective of mothers

Around 81% of mothers within our sample were aware of malnutrition detection by the AWWs. Around 49% felt that malnutrition detection increased among the community in the past few years. When enquired on reasons for increase, around 91% felt that it was due to more detections in the AWCs. This finding was a testament to the efforts undertaken by the programme to increase detection within the AWCs. The other reason cited by 61% of mothers was better knowledge among parents about malnutrition.

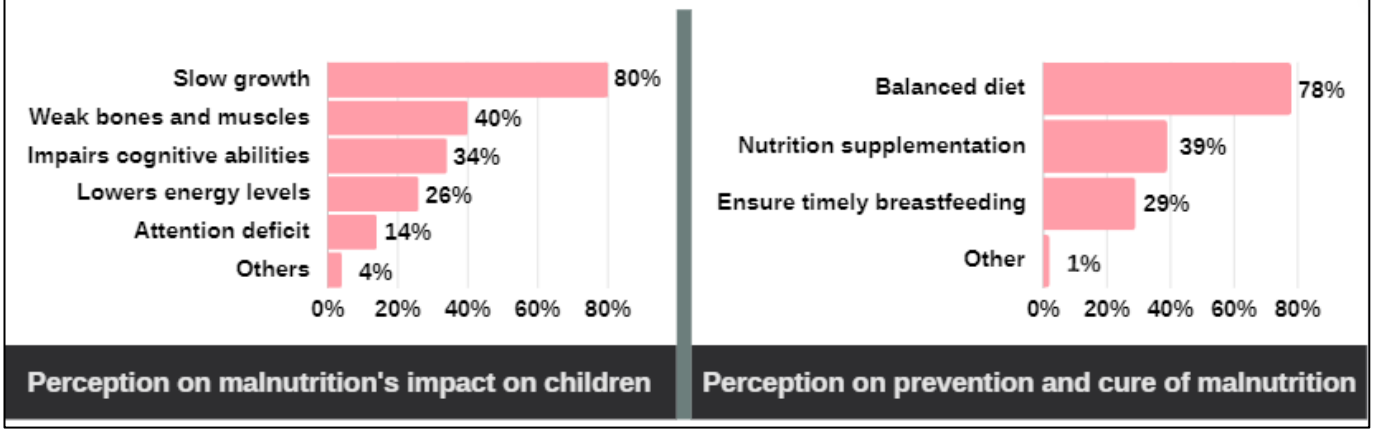
Figure 24: Malnutrition detection among children in AWCs

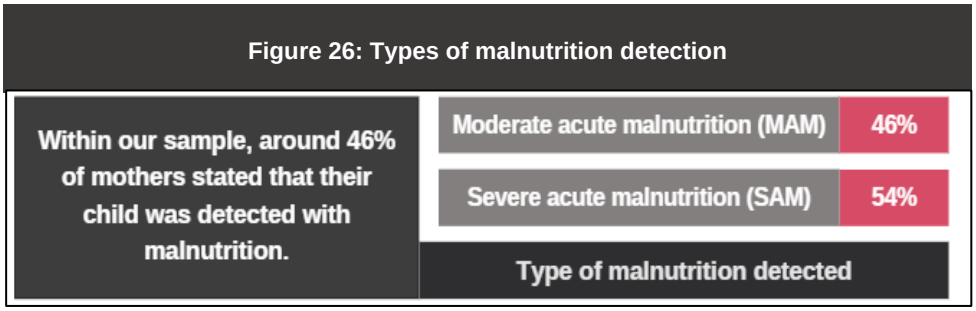


To test the mother's knowledge on malnutrition, they were enquired on the impact malnutrition has on children and how it can be prevented or cured.

In terms of impact of malnutrition, around 80% of mothers stated that it causes slow growth of height and weight milestones (80%), weak bones and muscles (40%), impairs cognitive abilities and causes learning challenges (34%), lowers energy level (26%), and makes it difficult for child to concentrate (14%). Around 78% found promotion of balanced diet to cure and prevent malnutrition. While 39%, 29%, and 1% also highlighted the need for nutrition supplementation, timely breast feeding and other measures respectively.

Figure 25: Mothers knowledge on malnutrition





Within our sample, around 46% (71) of mothers stated that their child was detected with malnutrition, of which 46% were detected with Moderate acute malnutrition (MAM)[18] and Severe acute malnutrition (SAM).[19]

E.2. Moderate acute malnutrition (MAM) among children

MAM refers to a state where a child's nutritional status falls between normal and severe acute malnutrition. It is often characterized by a moderate deficit in weight for height and mid upper arm circumference (MUAC). The impact of MAM on children on children will be significant.

Impact of MAM on children:

1) **Growth stunting:** Mam can lead to impaired linear growth, resulting in stunting. This affects child's overall physical development, leading to long term consequences.
2) **Compromised immune function:** MAM children are more susceptible to illness and infections due to weak malnutrition.
3) **Cognitive impairment:** Nutritional deficiencies during critical stages of brain development can result in cognitive impairment. It may affect child's learning ability, memory, and overall cognitive functions.
4) **Reduced physical endurance:** Children with MAM may experience fatigue or reduced physical endurance affecting their ability to engage in daily activities and play.
5) **Delayed recovery:** If not addressed promptly, MAM can progress to severe acute malnutrition, leading to more complications.

To mitigate the impact of MAM, early detection and appropriate nutrition interventions are essential. Providing nutrition dense food, nutritional supplements, and monitoring growth are key components while treating MAM.

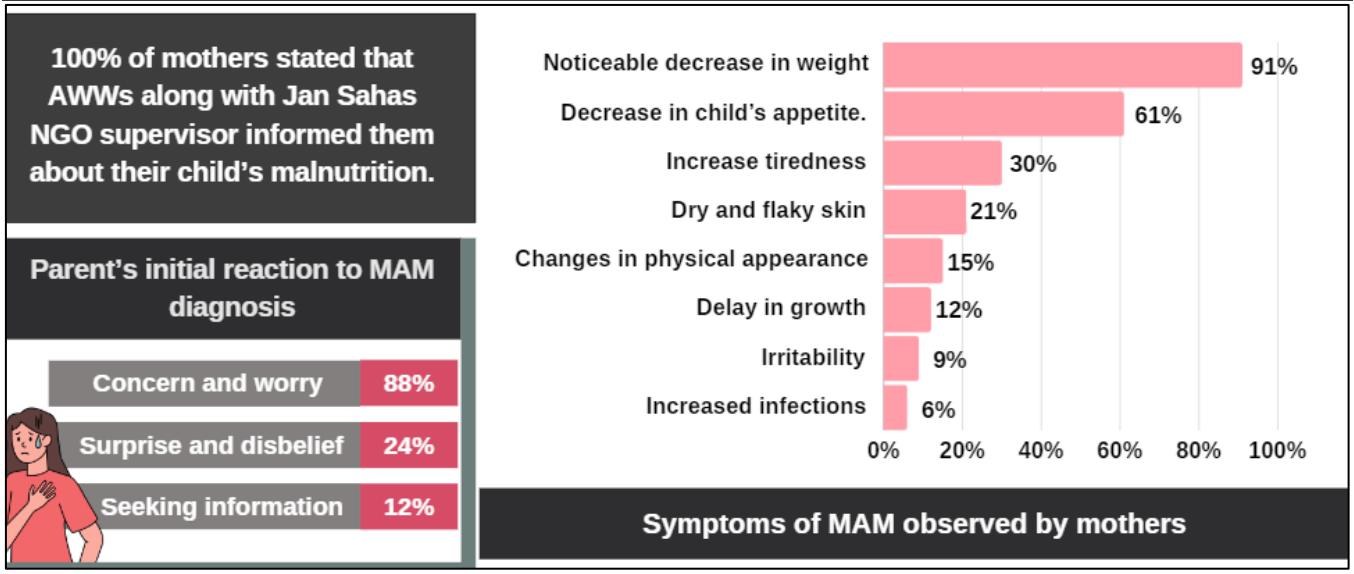
Within our sample, 46% (33) of those whose children were detected with malnutrition had MAM. 100% got to know about the issue through Jan Sahas NGO supervisors. The initial react among the parents was worried and concern (88%), surprise and disbelief (24%) and around 12% were seeking to know more information.

The parents stated that they had observed several symptoms of MAM in their children for some time but didn't have the requisite knowledge to recognise the issues. Around 91% found noticeable decrease in weight of the child, 61% found decrease in child's appetite, 30% found their child to be perpetually tired and 21% found them to have dry and flaky skin. Some parents also found issues such as delay in growth, irritability and increased susceptibility to infections.

[18] In children aged 6–59 months, moderate acute malnutrition is defined as moderate wasting (i.e. weight-for-height between –3 and –2 Z-scores of the WHO Child Growth Standards median) and/or mid-upper-arm circumference (MUAC) greater or equal to 115 mm and less than 125 mm.

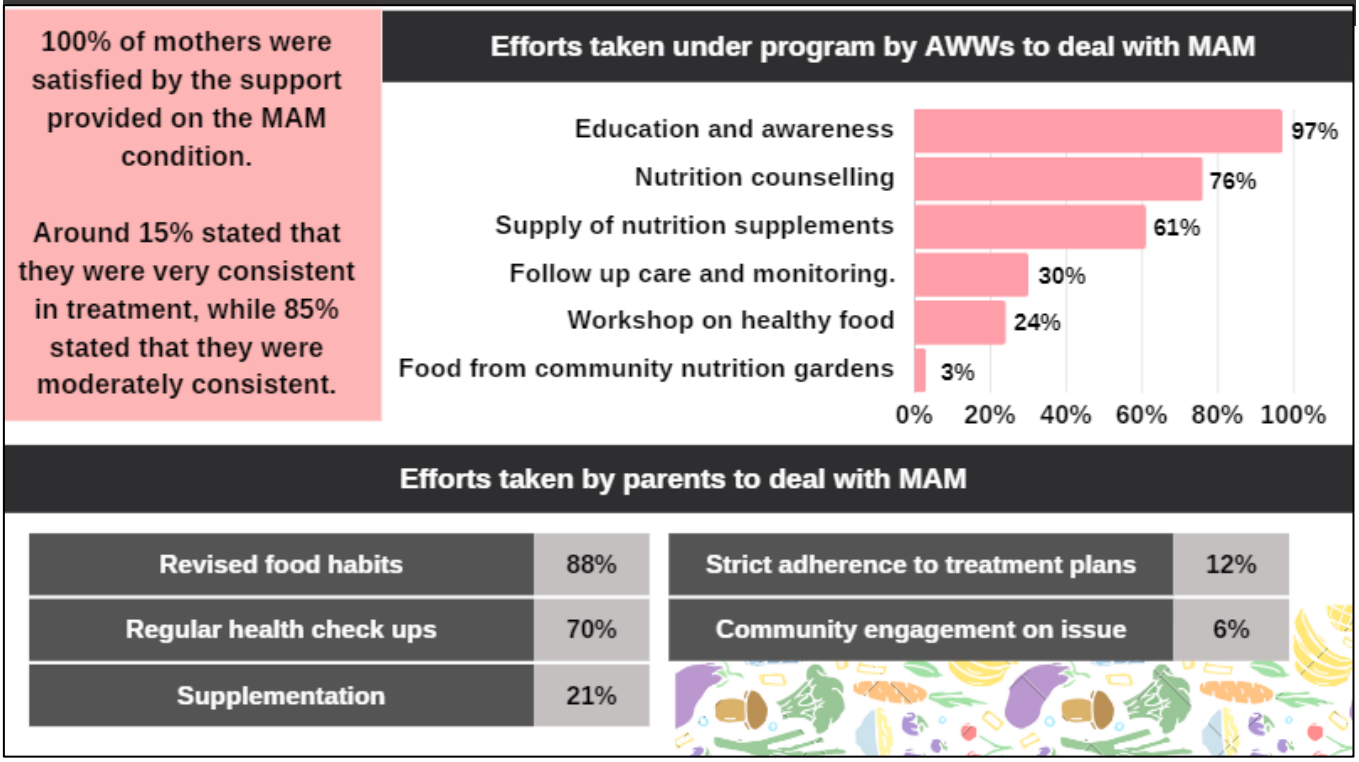
[19] In children who are 6–59 months of age, severe acute malnutrition is defined by a very low weight-for-height/weight-for-length, or clinical signs of bilateral pitting oedema, or a very low mid-upper arm circumference.

Figure 27: Moderate acute malnutrition detection



The programme supported the mothers of children detected with MAM in several areas—such as education and awareness (97%), nutrition counselling (76%), providing nutrition supplements (61%), follow up care and monitoring (30%), workshops on healthy food or Poshan Mela (24%) and supply of food from community nutrition gardens (3%).

Figure 28: Efforts taken to deal with MAM

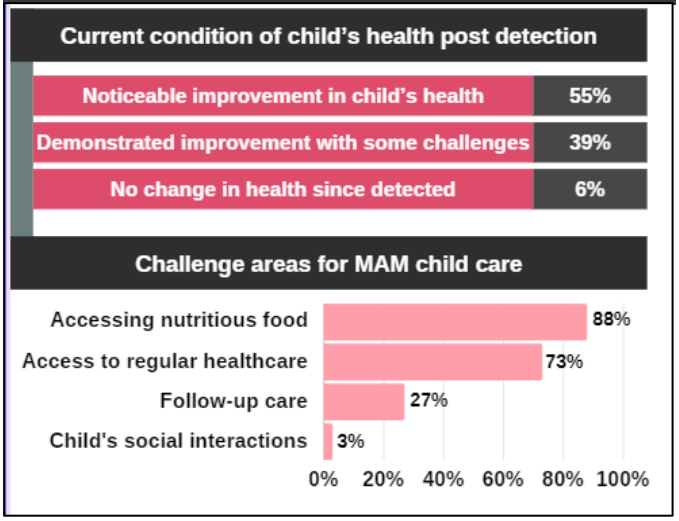


The Jan Sahas NGO supervisors and AWWs provided education and awareness to mothers on several areas of MAM—and the extent of it was as follows:

Extent of critical information on MAM provided to mothers	To great extent	To some extent	Not provided
Cause of MAM	**61%**	36%	3%
Signs and symptoms	**67%**	30%	3%
Impact of child's health	**67%**	30%	3%
Nutrition requirements	**67%**	30%	3%
Recommended dietary changes.	**52%**	45%	3%
Community resources and support	36%	**58%**	6%
Role of caregivers	30%	**67%**	3%
Potential intervention	27%	**61%**	12%
Psychological support	**48%**	30%	21%

100% of mothers were satisfied with the support of the NGO. They also realized that for curing MAM, the parents had to take active efforts in child's nutrition and care.

Figure 29: Current condition of child's health and areas of challenge for MAM childcare



As a result, around 88% of parents revised their kid's food habit, followed by 70% who went for regular health check-ups. Some parents also focused on food supplementation (21%) for their kids and strict adherence to treatment plans (12%). Around 15% of the parents stated that they were very consistent with the treatment plan, while 85% stated that they were somewhat consistent.

Around 55% mothers found noticeable improvement in their child's health post detection, while 39% found demonstrable improvements—but with some challenges. Around 6% found no change in health since detection.

The major areas of challenge for MAM childcare was access to nutritious food (88%), access to regular healthcare (73%), and follow up care (27%).

The other areas of impact on child's behaviour due to treatment and their extent was as follows,

Extent of treatment impact on child's behavior	To great extent	To some extent	Not provided
Noticeable improvement in child's mood and behavior.	**55%**	45%	0%
Stability in behavior	**52%**	45%	3%
Improved social interaction with family and peers.	**61%**	36%	3%
Increased participation in school activity	45%	**48%**	6%
Increased energy levels	36%	**64%**	0%
Reduced irritability	24%	**76%**	0%
Better sleep pattern	30%	**64%**	6%
Improved concentration	27%	**70%**	3%

E.3. Severe acute malnutrition (SAM) among children

SAM refers to a life-threatening condition characterized by significant deficit in weight for height, severe wasting, or presence of nutritional edema. SAM has profound impact on children's health.

Impact of SAM on children:

1) **Mortality risks:** SAM significantly increases the risk of mortality, making affected children vulnerable to life threatening complications such as infections and organ failure.
2) **Impaired growth:** Children with SAM experience severe stunting and wasting, leading to impaired physical growth. It can have long lasting effect on overall development.
3) **Weak immune system:** SAM compromises the immune system, making children more susceptible to infections. Even common illnesses can become severe and difficult to manage.
4) **Cognitive impairment:** SAM during the crucial stages of brain development can lead to permanent cognitive impairments, affecting learning abilities.

To mitigate the impact of SAM, urgent medical care is required.

Nutrition Rehabilitation Centre (NRC)

The criticality of SAM requires urgent medical attention and support. As a result, the government of India has set up Nutrition Rehabilitation Centre (NRC) to address SAM. NRCs are specialised facilities designed to provide comprehensive care and treatment to children with SAM. The key aspects include,

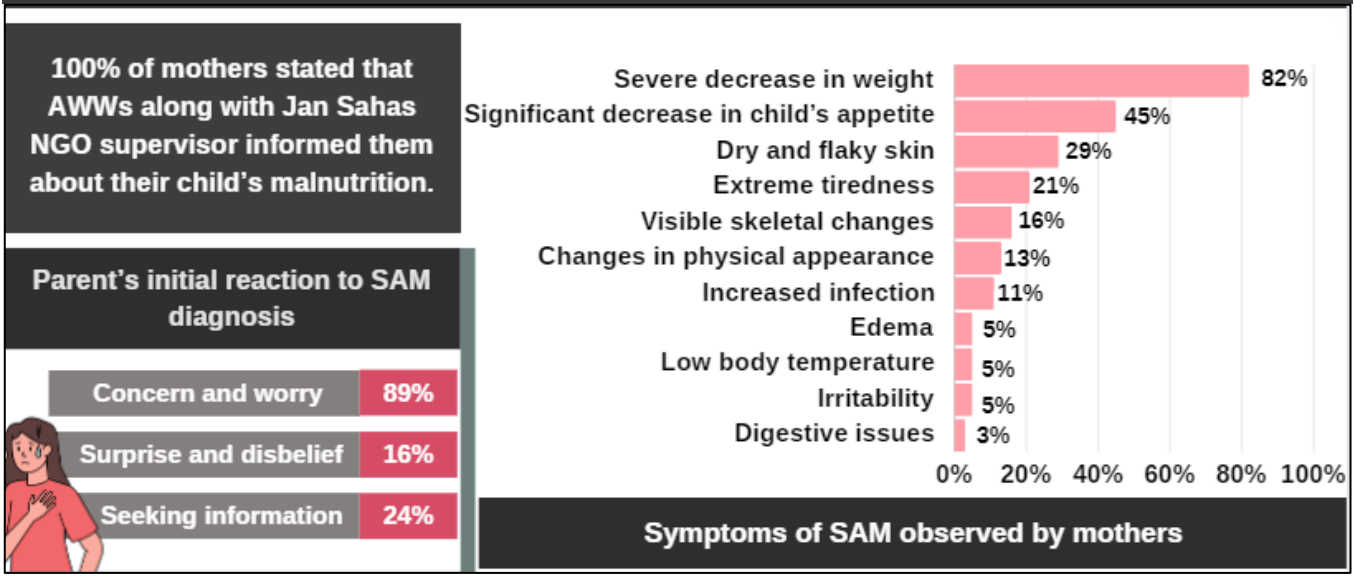
1) **Medical treatment:** NRCs offer medical care to manage complications associated with SAM, such as infections and electrolyte imbalances.
2) **Nutrition Rehabilitation:** NRC provides therapeutic feeding with nutrient dense food and ready to use therapeutic food (RTUF) to address severe malnutrition. The goal is to restore child's nutrition status to healthy level.
3) **Counselling and education:** NRCs offer counselling and education to parents or care givers on proper nutrition, hygiene, and childcare practices to prevent future instances of malnutrition.
4) **Follow up care:** After discharge, NRCs often provide follow up care and support to ensure sustained recovery and child's growth.

The centre plays an integral role in saving lives and preventing long term health consequences associated with SAM. However, it is essential to diagnose the issue to refer kids to NRC for care**.**

Within our sample, 54% (38) of those whose children were detected with malnutrition had SAM. 100% got to know about the issue through Jan Sahas NGO supervisors. The initial react among the parents was worried and concern (89%), surprise and disbelief (16%) and around 24% were seeking to know more information.

The parents stated that they had observed several symptoms of SAM in their children for some time but didn't think it was so severe. Around 82% found severe decrease in weight of the child, 45% found significant decrease in child's appetite, 29% found their child to have dry and flaky skin and 21% found their child extremely tired. Some parents also found issues such as visibility of skeleton, changes in physical appearances, increase in infections, edema, lower body temperature, irritability, and digestive challenges.

Figure 30: Severe acute malnutrition detection



The programme supported the mothers of children detected with SAM in several areas—such as provided immediate medical attention and emergency care (95%), guided and supported admissions at NRC (82%), nutrition counselling (47%) and healthcare support through regular monitoring (34%). Some mothers also highlighted support in form of psychological comfort (26%), supply of therapeutic food (18%) and training of care givers (11%).

The Jan Sahas NGO supervisors and AWWs provided education and awareness to mothers on several areas of SAM—and the extent of it was as follows:

Extent of critical information on MAM provided to mothers	To great extent	To some extent	Not provided
Signs and symptoms	**82%**	30%	3%
Importance of immediate care	**82%**	30%	3%
Impact of child's health	**85%**	30%	0%
Nutrition requirements	**70%**	39%	6%
Recommended dietary changes.	55%	**61%**	0%
Community resources and support	45%	**64%**	6%
Admission at Nutrition Rehabilitation Centre (NRC)	39%	**70%**	6%
Role of caregivers	**61%**	52%	3%
Potential intervention	39%	**67%**	9%
Psychological support	30%	**70%**	15%

As discussed above, NRC admission is critical for children suffering from SAM to provide them care and nutrition to heal. Within our sample, only around 87% of mothers of SAM children admitted them into NRC. The rest 13% did not admit their children primarily because of fear of stigmatization and family commitments. Since NRC requires mothers of the children to live with them during treatment, they have to let go of their daily responsibilities and commitments. In certain cases, they also have to let go of their daily wages. As a result, the women are mostly reluctant to admit their child. Additionally, there is also a lot of pressure from family for fulfilling household duties and responsibilities. Hence, there is immense need of counselling for the mothers and family members, to make them understand the criticality of admission on their child's health. In case of loss of daily wages, NRC provides mothers a sum of 1600 post treatment as an incentive to stay.

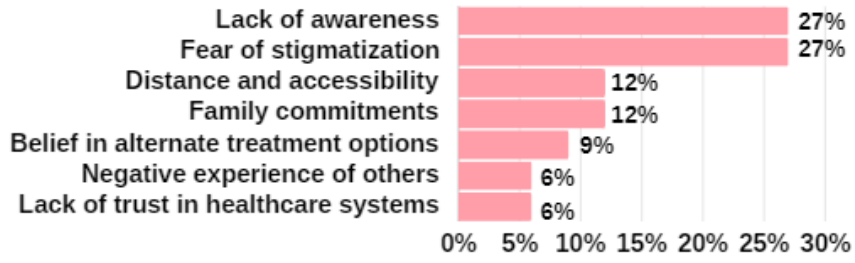
Despite all of this support, and need—among all mothers who admitted their children at NRC, around 42% were hesitant. The hesitation came primarily due to lack of knowledge/awareness, fear of stigmatization, distance and accessibility of NRC and family commitments.

Figure 31: Admission of children in NRC

87% of mothers of SAM children admitted them into NRC.

The rest 13% (5) mothers did not admit their children primarily due to fear of stigmatization and family commitments.

Among all mothers who admited their children at NRC, 42% were initially hesitant.



Reasons for hesitation while admitting child in NRC

Less than 3 days	6%	8-12 days	6%
3-5 days	6%	12-14 days	45%
6-8 days	15%	More than 14 days	21%

Total number of days child was admitted at NRC

Around 34% mothers found it difficult to complete full 2 weeks at NRC. The primary reasons were,

- Family pressure on mothers to come back home for household management (57%)
- Family pressure on mothers to return home to take care of other children (43%)
- Daily wage loss (29%)

These mothers were extensively counselled by Jan Sahas team to complete the treatment.

Post treatment, 8% of the mothers took their children for only 1 follow up session, while 55% mothers took their children for 2 follow up sessions, and 16% took them for 3 follow up sessions. Only 8% took them for 4 checkups.

82% of the mothers were satisfied with the support provided on SAM treatment by the AWWs and Jan Sahas supervisors.

The total number of days child was admitted varied from less than 3 days for 6%, to 3-5 days for 6%, 6-8 days for 15%, 8-12 days for 6%, and 12-14 days for 45% and more than 14 days for 21%. The NRC guidelines recommend at least two weeks of stay—however, around 34% found it really difficult to finish the 2 weeks stay. The primary reason being family pressure from mothers to come back home for household management (57%) and to take care of other children (43%). Around 29% couldn't bear daily wage loss.

All of these mothers were extensively counselled by Jan Sahas team to complete the treatment. The follow-up checks post treatment from NRC was low with majority (63%) of mothers taking their children for only one or two follow ups. Only 16% took them for 3 visits while 8% took them for 4 visits. The guidelines recommend at least 4 follow up visits post treatment from NRC.

82% mothers were satisfied with programme support on NRC admissions and assistance. The extent of support was as follows:

Extent of support for NRC admissions	To great extent	To some extent	Not provided
Guidance and counselling on importance of NRC admission	21%	**76%**	3%
Coordination with healthcare providers	18%	**79%**	3%
Offered logistical support to NRC.	33%	**64%**	3%
Assisted in preparing and providing necessary documents for admission.	30%	**64%**	6%
Advocated for priority admissions.	**64%**	33%	3%
Established consistent support for admission related queries	**55%**	39%	6%

They mothers realized that for curing SAM, the parents had to take active efforts in child's nutrition and care.

As a result, around 95% of parents revised their kid's food habit, followed by 63% who went for regular health check-ups. Some parents also focused on food supplementation (32%) for their kids and strict adherence to treatment plans (16%). Around 21% of the parents stated that they were very consistent with the treatment plan, while 71% stated that they were somewhat consistent, and 8% were not consistent.

Figure 32: Efforts taken by parents to deal with SAM

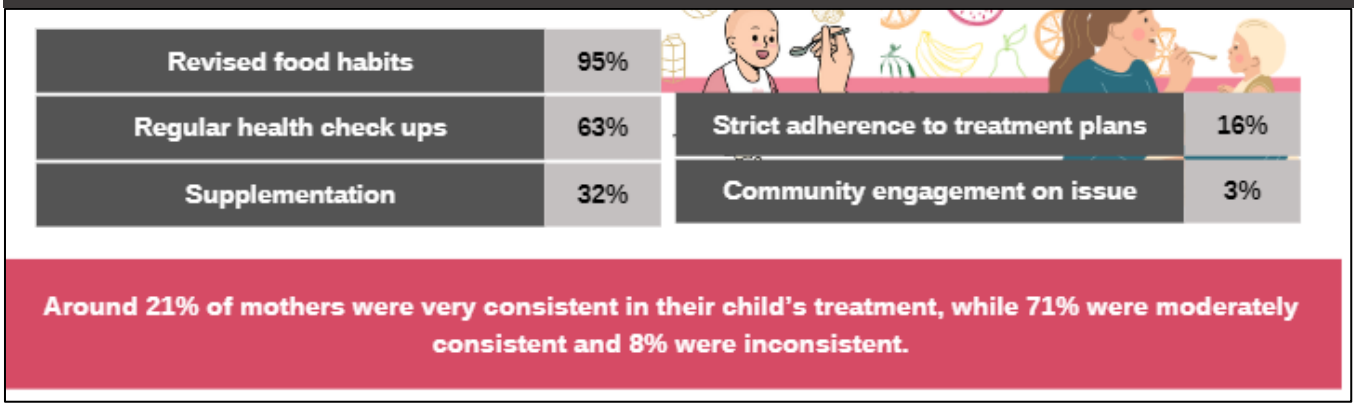
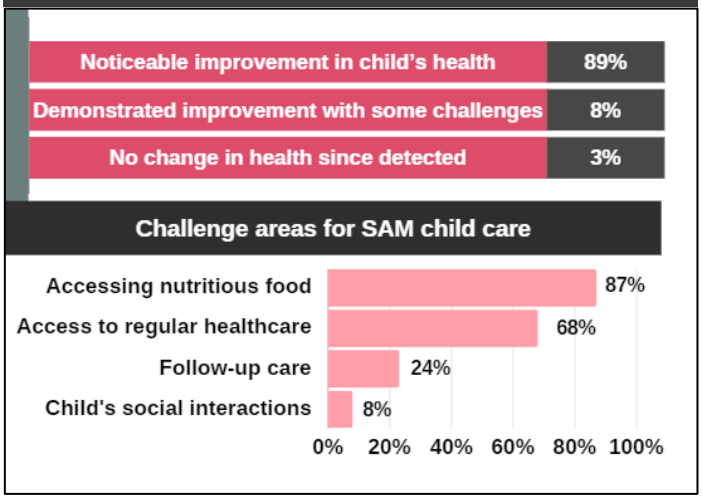


Figure 33: Current condition of child's health and areas of challenge for SAM childcare



Around 89% mothers found noticeable improvement in their child's health post detection, while 8% found demonstrable improvements—but with some challenges. Around 3% found no change in health since detection.

The major areas of challenge for SAM childcare was access to nutritious food (87%), access to regular healthcare (68%), and follow up care (24%).

Mothers of SAM kids at NRC

The other areas of impact on child's behaviour due to treatment and their extent was as follows,

Extent of treatment impact on child's behavior	To great extent	To some extent	Not provided
Noticeable improvement in child's mood and behavior.	**74%**	24%	3%
Stability in behavior	**71%**	26%	3%
Improved social interaction with family and peers.	**55%**	42%	3%
Increased participation in school activity	**58%**	39%	3%
Increased energy levels	39%	**58%**	3%
Reduced irritability	26%	**66%**	8%
Better sleep pattern	21%	**71%**	8%
Improved concentration	24%	**74%**	3%

"Earlier, when children were diagnosed with SAM, the mothers were extremely reluctant to admit them into the Nutrition Rehabilitation Centre, however, now, after the intervention, they have gained perspective on the importance of nutrition."

Shakuntala Rathour, ICDS sector supervisor, Aamchopra, Damoh

Discussions with NRC food demonstrators (FD)

Under the Aadhar Aangan programme, Jan Sahas NGO worked in Damoh grameen block for 2-3 years. They donated toys, lunch boxes etc. to the NRC and encouraged the mothers to admit their kids to NRC. This resulted in a significant increase in the number of children being admitted, especially from remote locations. We also had to increase the bed count to 30 from 20. The NRC was operating at close to full capacity, with an occupancy rate of between 90% to 100%.

However, after the program ended, the referrals declined sharply. The occupancy rate has now fallen to just 50%, and we are back to 20 beds. The AWWs have additional responsibilities that makes it difficult for them to consistently follow up with mothers for NRC admissions post SAM detection. The mothers anyway are reluctant to come, and without consistent counselling and follow-up, the children's health suffer.

We request the program to be restarted for identification, detection, and referral of SAM children in NRC. These children need help.

- **Sangita Chourasiya, Food Demonstrator, NRC, Damoh**

The Jan Sahas supervisors under the Aadhar Aangan programme were very efficienct in detecting SAM kids and referring them to the NRC. They were very particular with their counselling. In certain cases, they went with panchayati raj members and other village stakeholders to households of SAM kids to convince the family for NRC admissions. Due to this persistence, we saw high occupancy at our NRC. In addition to referrals, they also assisted the families in follow up care and monitoring. In certain cases, the supervisors also provided blood to the children in need.

After the program ended, the NRC has low occupancy. We request to have more such programs in the future.

- **Suman Jain, Food Demonstrator, NRC, Tendukheda**

Entrance, beds, and play area at Damoh NRC

F. Child vaccinations

All mothers within our sample provided vaccinations to their children. Around 64% did it at AWCs, 20% at hospitals and 16% at PHCs. The mothers stated that they have always been active in providing vaccinations for their children.

"Earlier the mothers were proactive in availing vaccinations for their children, but they avoided vaccination during pregnancies. However, post Aadhar Aangan intervention there has been an uptake in pregnant women vaccination".

Malti Lodhi, AWW, Imalidol, Tendukheda

G. Impact of Covid-19

AWWs faced increased workload during the COVID-19 period when AWCs were closed. Despite challenges, they continued their efforts to support the community. They, along with Jan Sahas supervisors went door-to-door to provide counselling among pregnant and lactating mothers. They also detected children with malnutrition and provided the due course of action.

Model AWC under Aadhar Aangan programme at Aamchopra

H. Programme through the eyes of key stakeholders

Interaction with AWWs and helpers revealed the following:

1) Training:

- A 7-day training programme was provided by Jan Sahas NGO for Model Anganwadi Centers, split into 3 days, 3 days, and 1-day sessions. Non-Model Anganwadi Centers received 3 days of training.
- Training areas included nutrition needs for pregnant and lactating mothers, malnutrition among children, with a primary focus on early child curriculum and pedagogy support.
- Training for Damoh Gramin Block Anganwadi Centres was conducted at Tulsi Hotel Damoh, while Tendukheda sessions were held in Tendukheda.
- The training of helpers enhanced their skills, and they were able to take over some responsibilities from AWWs.

2) Project implementation:

- AWWs interacted with supervisors of their sector who visited their AWCs at least once a month. In addition, they also attended monthly virtual meetings arranged by the government, wherein, the Jan Sahas Ngo supervisors guided on the way forward.
- The AWWs were supported by the supervisors and guided on counselling techniques. The supervisors also went door-to-door with the AWWs.
- Most AWWs believed that monitoring of activity was low, as one supervisor was looking after 25-30 AWCs within one sector.

3) Community engagement and impact in key programme areas:

- **Nutrition and kitchen garden initiatives:**
  - AWWs conveyed training insights to pregnant and lactating women, emphasizing the importance of nutrition for both mother and child.
  - Recommendations were made for affordable nutrition choices. The promotion of kitchen gardens was facilitated by distributing vegetable seeds. However, several households did not adopt the strategy.
  - The nutrition garden developed under the programme at model AWCs were also non-operational due to lack of maintenance by AWWs.

- **Vaccination camps and home visits:**
  - The AWWs utilized the state government organized monthly vaccination camps for pregnant women to spread awareness on health and nutrition. The integration of health education into routine vaccination activities showcased effective community engagement.
  - They also conducted door-to-door visits to further reinforce nutrition knowledge and counselling.
  - Beneficiaries reported that AWWs extended their guidance during home visits, created a personalized approach to health education.

- **Awareness on anaemia during pregnancy:**
  - AWWs reported success in convincing women, including their in-laws, about the importance of nutrition and health during pregnancy.
  - Anaemia awareness was highlighted, and ANM-assisted tests were conducted to identify those in need of intervention.

- **Institutional delivery advocacy:**
  - AWWs successfully conveyed the significance of institutional deliveries, aligning with the state government's focus on the same.

- Positive changes were reported, with home deliveries becoming negligible due to the combined efforts of the state government and Aadhar Aangan programme.

- **Malnutrition detection and treatment:**
  - AWWs reported significant improvements in the health condition of children diagnosed with MAM after receiving treatment. They counselled them on recipes to be cooked for better health as per trainings provided.
  - The programme played a crucial role in providing support to children with SAM. The supervisors extensively counselled parents to admit their child at NRC. In case of resistance from parents, all critical stakeholders of the village were mobilized to convince the families, resulting in recovery of many children. In cases where transportation was a challenge, the supervisors also arranged vehicles to admit the children.
  - In the past 3 years, at least 4-5 children in each AWCs were identified as SAM and referred to the NRC. This is an evident increase in referral.
  - The referrals have declined after the programme ended.

- **Follow-up and Post-NRC Care:**
  - The supervisors actively engaged in follow-up visits for SAM children post-NRC treatment. Most parents participated in 3-4 follow-up visits. However, some parents did not respond to follow-up requests.
  - The children identified as SAM but not admitted to NRC received careful attention from the supervisors and AWWs. The parents were counselled on providing extra care and proper nutrition.
  - Among children admitted to NRC, around 70-80% completed the 14-day treatment regimen, while 20-30% discontinued due to family problems. The reason for discontinuation was mostly personal.

- **Anganwadi centres and teaching:**
  - The model AWCs exhibited improved infrastructure, including children's chairs and tables, paintings, and theme-based learning corners. The other AWCs expressed a need for such support for their centres too.
  - AWWs reported changes in curriculum and pedagogy after the programme intervention, emphasizing new teaching methods through songs, games, and literacy charts.
  - The training positively impacted the enrolments, attendance and overall learning environment at the AWCs.

Other key stakeholders

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

- Pradeep Rai, DPO, Damoh

Consistency in respect to advocacy is key towards healthcare development of a marginalized community like in Tendukheda. Collective efforts of government, NGO and CSRs can bring lasting changes.

- Rinkal Ghanghoriya, CDPO, Tendukheda

The Adhaar Aangan staff had regular meetings with the CDPO, at least once or twice in a week. This led to great synergy between government officials and the field workers. The program should have been longer for a more sustained impact.

- Sanjeev Mishra, CDPO, Damoh

The NGO has worked a lot in the area of malnutrition. They have promoted breast feeding practices among mothers. Another important work they have undertaken is the development of model AWCs. These centres are so good that the community and children feel like they are part of a private school. It has largely increased the interest of students to go to these centres. The program has also done a lot in malnutrition detection, but it needs to work towards malnutrition prevention. The parents have to be provided with recipes through demonstrations.

- Shakuntala Rathour, ICDS sector supervisor, Aamchopra

The projects impact has been witnessed in the community's awareness on nutritional value of food items, and consumption patterns of pregnant and lactating women. Earlier, the community was reluctant to address the issues of Anemia, stunted growth, malnutrition etc. as matters of serious concern. However, post the Adhaar Aangan program, they realized the prevalence of these issues, and how they can be resolved through locally available food sources. The program officers have been dedicated towards the program goals and that is reflected in the community. This program needs to be continued and the villages would require additional support

- Rita Chatterjee, BMO, Hindoriya

05

Program Impact on SDGs

"To make noteworthy progress on sustainable development goals,

it is essential to progress on nutrition."

The agenda for Sustainable Development Goals (SDGs) were set in 2015 to end poverty, protect the planet, and improve the lives and prospects of everyone by 2030. There are 17 core goals, under which, nutrition and health are directly or indirectly related to at least 6 goals. Thus, any successful nutrition and community health-based intervention, have the potential to contribute to the achievement of these goals.

Direct effect of Aadhar Aangan on SDGs

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

Under the program, the primary goal is to improve nutrition among vulnerable communities, who find utmost challenge in receiving diverse and nutritious meals, due to lack of both, access and affordability. The program focuses on spreading awareness around nutrition requirements, local foodstuff, and methods to grow local foodstuff to facilitate complete nutrition in the community, reducing the challenges of undernutrition, low weight, vitamin deficiencies and malnutrition.

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

The program primarily caters the health and nutrition requirements of pregnant mothers, lactating mothers, and infants. The provision of ante natal care, nutrition knowledge, supplements, etc. have direct effect on the health of these groups, with potential to decrease the maternal mortality rates, neo natal mortality rates, and under five mortality rates.

Indirect effect of Aadhar Aangan on SDGs

SDG 1: No poverty

It is to be noted that well-nourished children are more likely to escape poverty based on their improved learning performance. Alternatively, well-nourished parents are more likely to have higher energy levels to work better and escape poverty.

SDG 5: Gender Equality

The program focuses on health of both boy and girl children— which thereby, also encourages them to perform better in school and use this learnings and gain for growth.

SDG 4: Quality Education

The children who are stunted, iron deficient and/or iodine deficient suffer impaired cognitive development which diminishing their learning potential. As a result, supplementary education programs have the potential to improve quality of education of children.

SDG 8: Decent work and economic growth

Better nutrition builds a healthy work force, who are more productive and good for the economy.

06

Program through the lens of OECD DAC framework

The OECD DAC framework provides the guidelines to determine the merit or worth of an intervention. They serve as the basis upon which evaluative judgements are made. Under its ambit, the study will analyse the key components of the overall programme.

#	Key Indicators under OECD DAC framework	Rationale
A.	**Relevance and Coherence**	
1)	**Need assessment of target community**	The project addressing the nutrition and health needs of rural areas of Damoh and Tendukheda caters the needs of the community on account of following reasons, - Majority of people in the community are from marginalized backgrounds and have low income. - The AWCs in these areas were in poor conditions prior to the intervention. They did not have basic amenities or infrastructure for learning. - Only few AWWs were active in reaching out to pregnant and lactating mothers, thus, the ANC services registration was less than optimal. The number of visits were fairly low too. - Only around 5% of women were aware of anaemia prior to the programme, revealing possibility of several high-risk cases without screening and consumption of iron rich food. - There was prevalence of home delivery to some extent., and fear of institutional delivery. - Low knowledge on nutrition during pregnancy - Poor detection of malnutrition within community due to low proactiveness among AWWs and questionable measurement methods. These reasons develop the base for programme execution in the programme location.
2)	**Alignment with government priority**	The programme is aligned with multiple government schemes such as, - Integrated child development service (ICDS) - PM-Poshan - National Food Security Act 2013 - Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)
3)	**Alignment with SDGs**	The programme aligns with several SDGs both directly and indirectly. The direct SDGs, - 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.
B.	**Efficiency**	

1)	**Process of documentation and program data collection**	The programme has an assigned M&E coordinator who is responsible for designing and implementing monitoring systems, collecting relevant data, and analysing programme outcomes. They cross verify data on the field to ensure validity of the study, through random checks, and daily tracking of field supervisors' activities on WhatsApp through pictures of receipts of admissions, discussion with stakeholders etc. The M&E coordinator also prepares monthly and quarterly reports highlighting the changes in the programme. However, there is scope to improve the flow of information between parties. ➢ For daily monitoring, a simple check list can be developed for the field supervisors. ➢ For monthly and quarterly report to donor, develop a well aligned structure with key indicators. ➢ Create a shared excel sheet where programme trends can be easily mapped.
2)	**Developed key performance indicators**	The M&E coordinator within the programme has 50 key performance indicators for the programme which is consistently tracked. The daily data is cumulated every month and based on which the data is updated on the sheet. Examples of some key indicators are, E-NRC admit indicators, how many kids did 4 follow ups, who are defaulters, after treatment, how many SAM kids became MAM, how are critical cases referred to bigger hospitals (Sickle cell, heart hole, cerebral palsy etc.)
3)	**Quality of programme staff**	The programme implementation partner had established an end-to-end team to ensure the execution of the project. The team members had defined roles and hierarchy to achieve the goals of the programmes. However, each supervisor had to cater to 30 AWCs—making it very difficult to assign more than one day to a single AWC. This impacted the effectiveness of the programme. The programme can consider reducing the burden per supervisor by either reducing AWCs coverage or increasing the number of supervisors. This will enhance the programme effectiveness and have a more in-depth impact on beneficiaries.
4)	**Involvement of stakeholders**	The programme involved several stakeholders into the programme from direct beneficiaries to indirect beneficiaries such as husband, in-laws etc. of the women. Additionally, the programme developed a strong community connect by engaging with local grassroot leaders such as village sarpanch. They also had regular meetings with WCD, ICDS department, health department and NRC officials.

C.	Effectiveness	
1)	**Beneficiary awareness**	The beneficiaries were aware about the Aadhar Aangan programme. However, all beneficiaries were not aware of all the components of the programme. Those who were aware about ANC and institutional delivery support—didn't know about nutrition counselling support in same depth. Hence, the impact of the programme was diverse for different locations. This can primarily be due to the engagement of a single field supervisor with 30 AWCs. There is a need to universalise the programme and ensure similar benefits are reached to all beneficiaries.
2)	**Coverage of marginalized group**	The programme covers marginalized groups—our sample has 53% women from scheduled tribes (ST), 33% from other backward castes (OBC) and 15% from scheduled caste (SC). Additionally, most respondents are from low-income backgrounds, with 63% earning less than Rs.50,000 annually, and 33% earning between Rs. 50,000 and Rs. 1,00,000.
3)	**Extent of coverage**	The programme is well spread out in Damoh Grameen and Tendukheda block by covering 306 AWCs and 112 AWCs respectively. However, for maximizing impact, the programme can consider trimming down the programme by focusing on select number of AWCs rather than spreading resources thinly across multiple locations. By concentrating efforts, NGOs can cultivate deeper connections with the community, understand specific needs and tailor interventions effectively.
4)	**Program level effectiveness**	The programme has been effective on multiple fronts, - The training of AWWs and helpers both has developed dual skillsets within the same AWCs. - There has been a 52% increase in ANC registration for youngest childbirth in comparison to oldest childbirth. - 95% women got to know about anaemia through the programme, and 41% were screened for anaemia. - There has been increase in vaccination of pregnant women. - There has been evident increase in AWWs involvement in the village. - There has been greater support towards institutional delivery—and a 10% increase in institutional delivery. - Some beneficiaries experienced improvement in diet to some extent. - The prevalence of kitchen garden and community nutrition garden was low. - Several women were enrolled in maternal schemes provided by Government of India. - There was evident development in infrastructure of model AWCs.

		- The AWWs utilised new techniques for learning. - There was increase in MAM and SAM detection. - There was increase in NRC referrals. The programme was effective on several parameters, however, there was variations as per locations.
D.	**Impact**	
1)	**Key impact areas**	The key impact areas were as follows, - 78% believed health of pregnant mothers had improved in the villages past 4 years to some extent, and 12% believed it has improved to great extent. - 83% believed that maternal deaths during pregnancy had considerably reduced in the villages past 4 years. - The community's willingness to go to hospital for ANC services and delivery has increased. - The pregnant mothers due to additional food items in diet experienced positive changes in health—due to increase in energy levels and weight management. - The model AWC infrastructure increased students' enrolment, attendance and retention. - The model AWC painting positively impacted children by enhancing the learning environment. - Improved health of SAM and MAM kids by great extent
E.	**Sustainability**	
1)	**Beneficiary feedback**	The programme does not take any beneficiary feedback
2)	**Internal assessments**	The programme does not conduct any internal assessments apart from regular monitoring
3)	**Exit plan**	There is no defined exit plan for the programme

07

Conclusion and Recommendations

Under the Aadhar Aangan programme, the focus was on improving the health of pregnant and lactating mothers and children enhancing the capacities of AWWs to provide health and nutrition counselling, detect children with malnutrition, promote kitchen garden, increase enrolments in maternal schemes etc.

The programme 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 programme in relation to model AWC development, detection of children with malnutrition, NRC registration, pregnant women vaccination etc. has been well recognised and appreciated within the community.

However, it is to be noted that since the programme was based on change in dietary and health care behaviours of the respondent, the change will go through a slower process. An awareness campaign translates into change in perception, and then overtime, into practice. This change is proven to be even difficult in tight knit communities with rigid practices going on for generations. As a result, consistent efforts are required from the stakeholders to provide nutrition and health specific knowledge to the community, to instil the need and compulsion for change. The following can be adopted to ensure sustainable impact in the programme locations,

1) **Limiting coverage:** The programme is well spread out in Damoh Grameen and Tendukheda block by covering 306 AWCs and 112 AWCs respectively. However, for maximizing impact, the programme can consider trimming down the programme by focusing on select number of AWCs rather than spreading resources thinly across multiple locations. Each AWC can be developed thoroughly. By concentrating efforts, NGOs can cultivate deeper connections with the community, understand specific needs and tailor interventions effectively.

2) **Sample food tasting tables and demonstration tables-** Under the programme, there can be demonstration of new recipes and tasting facilities once in 3 months in the programme location. This can be done during gatherings for vaccination camps or health camps. The beneficiaries should also be provided the information on the benefits of the same. This will allow the respondents to interact with their taste buds too improving their understanding of the recipe. It may also encourage them to try it at their own homes with local and easily available food items.

3) **Village level competition on healthcare and nutrition knowledge-** During counselling, the women must be informed about a small competition to be conducted once in six months, wherein multiple questions on nutrition and health will be asked—and the women answering the most will receive a gift prize. The gift could be any household item. This shall act as an incentive to listen and learn better.

4) **Standardization of reporting practice:** The programme has visible programme impact, but it is hard to be tracked through its monthly and quarterly reports. As a result, there is a need for a well aligned structure with key indicators for the reports. Additionally, there can be a shared excel sheet between implementation partner and donors where programme trends can be easily mapped.

5) **Advocacy with government:** For malnutrition detection, there can be rounds of discussions with the government to change the standards from vridhi charts to MUAC z scores, edema checks and height to weight checks to improve the results validity. Additionally, there can also be focused campaigns on spreading large scale awareness on symptoms and impact of malnutrition to increase self-reporting among mothers.

6) **Assessing community needs prior to program implementation:** The study found that kitchen garden program did not take up among beneficiaries primarily due to water challenges prevalent in the areas. As a result, it is essential to identify the core challenges, and potential before implementing the program.

7) **Development of a sustainability plan:** The programme needs to develop a sustainability plan—by taking feedback from beneficiaries, conducting internal assessments and developing an exit plan.

Best practices within the programme:

1) **Training of both AWWs and helpers:** Training both AWWs and helpers stands as a best practice for Anganwadi development programmes due to myriads of reasons. It ensures standardized level of expertise, ensuring consistent and quality services across the centres—even in the case of absenteeism of one personnel. Additionally, it also allows them to collaboratively work to address diverse challenges faced by the community.

2) **Community engagement with local stakeholders and government stakeholders:** The programme involved several stakeholders into the programme from direct beneficiaries to indirect beneficiaries such as husband, in-laws etc. of the women. This was instrumental in enhancing the impact of the programme. Additionally, the programme developed a strong community connect by engaging with local grassroot leaders such as village sarpanch. They also had regular meetings with WCD, ICDS department, health department and NRC officials.

3) **Intensive counselling for admissions in NRC:** The programme supervisors were active in their follow ups post detection of SAM in children. They proactively provided emergency care, and counselled parents by providing necessary information on grievous impact of SAM on children's growth and development. They also provided additional support over and beyond programme guidelines—by facilitating transport and donating blood to the children. There have also been instances wherein if parents were reluctant to admit their child, the block coordinators, the sector supervisors, AWWs, sarpanch, and other influential people at the village level approached the households to counsel and convince for the well-being of the child.

Annexure

Notable work by other CSR organizations in similar areas of health and nutrition

Bills and Melinda Gates Foundation

The foundation provides technical assistance to government of Bihar at the field level and state level through partner organizations that have appropriate expertise in the areas of maternal, newborn, child health, child nutrition, family planning, immunization, infectious disease control and improvement of health systems. They also test innovations and generate evidence to strengthen and scale the capacity of health and nutrition systems.

Key Program Inputs- Strategic partnerships with stakeholders for change. The stakeholders include state governments, other global development agencies, domestic philanthropic organizations, local institutions, and domestic and international research partners.

Key Program Outputs (2015-2019) in Bihar-

- ***Chronic Malnutrition (Stunting)- A 5.5% decrease in stunting in the state***
- ***Prenatal care- Increase in coverage from 35% to 53%***
- ***Postnatal care- Increase from 42% to 57%***
- ***Institutional delivery- Increase from 64% to 76%***

CARE India

CARE foundation developed a program strategy in 2020 to tackle the underlying causes of poverty and social injustice, to meet sustainable development goals (SDGs).

It also has focused programs in lines with the SDG 2 of zero hunger— since CARE considers rising food and nutrition insecurity as the defining challenge of the 21st century fueled by poverty conflict and climate change.

Key program Outcomes-

- ***Food Insecurity- Contributed to reduce food insecurity for close to 29 lakh people, in 20 countries.***
- ***Chronic Malnutrition (Stunting)- Contributed to over 11.8 lakh children under 5 escaping chronic malnutrition (stunting), an average reduction of 1.3 percentage points per year, in 13 countries.***
- ***Other measures of nutrition and food security- Contributed to nearly 720,000 people to improve other measures of nutrition or food security, in 11 countries. The Integrated Family Health Initiative in India helped increase exclusive breastfeeding for 4.8 lakh children, while the Scaling Up Nutrition (SUN) Fund project in Zambia contributed to improved access to nutrition services for 60,015 people.***

Adani Foundation's project SuPoshan

Under project SuPoshan, the foundation strives to reduce malnutrition and anaemia amongst adolescent girls and pregnant and lactating women, create awareness about the issue of malnutrition and anaemia and related factors amongst all stakeholders.

For this purpose, the program trains volunteers known as 'Sanginis' for anthropometric measurements and focused group discussions/family counselling for behavior change. The program is spread across 11 states and 1209 villages. It has a pool of 588 sanginis.

Key Program Inputs-

- ***45,679 FGDs and 96,245 family counselling covering 2.39 lakh women in the reproductive age group and adolescent girls.***
- ***3143 village level events across 1209 villages and 104 slums***
- ***1.73 lakh hemoglobin screenings***
- ***Iron folic tablets facilitated to 8362 anemic cases***

Key Program Outputs and Outcomes-

- ***Over 4,11,000 women and adolescent girls participated in focus group discussions***
- ***Improvement in hemoglobin of 5254 cases of anemia***

JSW Foundation's Mission Against Malnutrition Project

JSW's Mission Against Malnutrition (MAM) project blends action-research, evidence-based advocacy and administrative capabilities of multiple partners for fighting child malnutrition among disadvantaged families. They identify core micronutrient deficiency in the diets of under nourished children, and accordingly plan the additional supplements needed.

Key Program Inputs-

- ***Usage of spirulina, blue green algae, has a natural food (micro-nutrient) supplement (30,176 malnourished children and 15000 pregnant and lactating women and adolescent in 3 years)***
- ***Supplementing and complementing home and ICDS food based on child's requirement (Moderate or Acute malnutrition)***
- ***Partnership with key stakeholders (Government of Karnataka, CSR organizations, NGOs and Reputed research institutions)***

Key Program Outputs-

- **47% and 67% reduction in malnutrition among children who received 5 to 10 grams of supplements.**