

# Early lessons from Swabhimaan, a multi-sector integrated health and nutrition programme for women and girls in India

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**Location:** India

**What we know:** Poor nutrition status before and during pregnancy is a serious problem in India and a key driver of low birth weight and child undernutrition.

**What this article adds:** Swabhimaan is a five-year initiative (2016-2021) integrated within the Government of India's flagship poverty alleviation programme, Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), across three states in India, carried out in partnership with UNICEF. The programme aims to mobilise women via village-level women's collectives to develop and implement integrated nutrition microplans and strengthen local government services in order to improve the nutrition outcomes of women and adolescent girls. The results are presented of a midline evaluation carried out in 2018-2019 covering villages in five different sites across the three states (including 3,171 adolescent girls, 1,856 pregnant women and 3,277 mothers of children under two years of age). The results reveal strong progress in implementation with 336 village-level microplans developed, 77,000 females screened and 15,122 identified as being at nutritional risk and referred for nutrition, agriculture and social protection support. Midline results show a reduction in thinness in adolescent girls (13.8% versus 18.5% at baseline) and mothers with children under two years of age (44.6% versus 48.4% at baseline) and an increase in the average mid-upper arm circumference of

pregnant women (24.0cm versus 23.5cm at baseline). Evidence also shows improved household food security and improved uptake of government health, water, sanitation and hygiene and social protection services. Results suggest that utilising and funding women's collectives to respond to nutrition needs in their communities with integrated responses are feasible. The results of the endline evaluation and an impact evaluation will be forthcoming.

## **Background**

The poor nutritional status of a woman before and during pregnancy is a major cause of foetal stunting and low birth weight (LBW). In India, stunting affects around 47 million (38%) children aged under five years (NFHS-4, 2015–16). An estimated five million Indian children (19%) are born with LBW, around 4.4 million of whom are born small for gestational age (NFHS-4, 2015-16). Most Indian women enter pregnancy with poor nutrition – 23% of women of reproductive age are too thin for their height (body mass index (BMI) less than 18.5 kg/m<sup>2</sup>) and 53 % of women are anaemic (increasing to 58% among pregnant women). Additionally, 8% of pregnant women (around 4.5 million) are adolescents (NFHS-4, 2015–2016). Despite national and state level policies and programmes to deliver maternal care services in India, high quality coverage remains low.

The Indian Government's flagship poverty alleviation

programme, Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), implemented under the Ministry of Rural Development, aims to break the intergenerational cycle of poverty through the economic empowerment of vulnerable women and families. DAY-NRLM's women's collectives provide an opportunity to strengthen the delivery and promotion of women's nutrition services at community-level, linking livelihood promotion, women's nutrition promotion and women's empowerment, and harnessing the ability of women to plan and implement context-specific programme activities. A 2016 scoping study suggested that DAY-NRLM village organisations have the potential to manage grants for improving the last mile delivery of essential nutrition services for women provided they are enabled, supervised and incentivised (Sethi et al, 2017).

On the basis of these findings, Swabhimaan was set up as a five-year initiative launched in 2016 by DAY-NRLM in partnership with UNICEF India across three states in India (Bihar, Chhattisgarh and Odisha). The programme aims to improve the nutrition outcomes of women and adolescent girls using DAY-NRLM women's collectives as the key mode of delivery focusing on four primary target groups: adolescent girls, newlywed women, pregnant women and mothers of children under two years of age (secondary target groups include husbands, mothers-in-law and farmer producer groups). Community-led actions are delivered by DAY-NRLM. Systems strengthening

activities also take place in convergence with four government departments to increase access to government services: the Department of Women and Child Development to increase the reach and quality of Integrated Child Development Services (ICDS), the Department of Health and Family Welfare for Village Health, Sanitation and Nutrition Days (VHSND), the Department of Water and Sanitation to improve water quality and achieve open defecation free villages and the Department of Food and Civil Supplies to increase the coverage of food subsidy schemes. The programme is funded by UNICEF India in Bihar, which serves as a demonstration and learning site, while the programme is led by the State Rural Livelihoods Mission (SRLM) in Chhattisgarh and Odisha with UNICEF providing a portion of the support costs. Built into this programme are baseline, midline and endline studies. The results of the midline study are presented here to help to fill the evidence gap on maternal nutrition interventions delivered via women's collectives in India.

## **Intervention**

Swabhimaan provides a comprehensive package of 18 nutrition-specific and nutrition-sensitive interventions spanning the health, nutrition, agriculture and livelihoods sectors targeted at women at preconception, during pregnancy and after birth (Table 1). These interventions are delivered through a combination of community-led

and systems strengthening actions (Table 2).

## **Table 1: Swabhimaan package of nutrition-specific and nutrition-sensitive interventions**

## **Table 2: Community-led and systems strengthening actions under Swabhimaan**

For the delivery of community-led actions, communities are engaged to customise a maternal nutrition delivery package responsive to local needs and to manage grants to implement the interventions. The community comes together under women's collectives promoted under DAY-NRLM made up of female representatives from self-help groups (SHGs) and their federations (Village Organisations (VOs) and Cluster Level Federations (CLFs)). Each federation develops an integrated nutrition microplan that identifies and prioritises nutrition and related problems among target groups in their village/s, an annual plan of activities and a budget. These budgets are collated at block level, reviewed and approved by DAY-NRLM and submitted to the SRLM, an autonomous body under the state government, which then provides the annual grant to each VO accordingly.

The development of nutrition microplans is facilitated by a social action committee (SAC) for each VO. The SAC



nominates an active SHG member to be the Community Resource Person (CRP). Women are eligible for nomination who are literate, effective communicators and who have graduated out of poverty. CRPs, known locally as *Poshan Sakhis* and *Kishori Sakhis*, undergo three days of pre-service training on integrated nutrition microplanning, the use of mid-upper arm circumference (MUAC) tapes and measurements for screening nutritionally 'at risk' adolescent girls and women (MUAC <19 cm and <23 cm, respectively) (Bulliyyag, 2007; Tang, 2013) and participatory learning and action (PLA) techniques to facilitate monthly meetings for women and adolescent girls. Following their training, CRPs facilitate the development of integrated nutrition microplans, supervised by the SRLM, and also provide home-based counselling for target groups, food demonstrations and support for the development of household nutrition gardens (gardens growing fruits and vegetables for household consumption).

The CRPs receive INR450 (USD\$7) to develop an integrated nutrition microplan and thereafter a similar monthly incentive for facilitating the implementation of planned activities. CLFs receive grants including INR500 (~USD\$7) for meetings with newlywed couples, INR500 (~USD\$7) for each 'welcome kit' given to newlywed couples with essential items (iron-folic acid (IFA) supplements, contraceptives, sanitary napkins), INR1500 (~USD\$22) to review each VO's integrated nutrition

microplan and INR5000 (~USD\$77) to develop farmer training school sites. Community-led interventions are monitored through the collation and analysis of monthly reports submitted by CRPs for each VO that are then reviewed by CLFs and block-level supervisors.

The system strengthening interventions include quarterly training of government accredited social health activists (ASHA) and auxiliary nurse midwives (ANM) to strengthen the delivery of the fixed monthly health camps (VHSND) for the provision of antenatal care (ANC) check-ups, counselling, micronutrient supplementation, take-home rations under the supplementary nutrition programme, immunisation, weight monitoring, family planning and the identification and care of groups at nutritional risk. Training is also provided to strengthen Adolescent Health Days to improve access to adolescent health and nutrition services. In addition, health service providers (ASHA, ANM, Anganwadi workers (AWW) and lady supervisors of ICDS and the Public Distribution System (PDS) fair price shop owners are regularly engaged with to improve the delivery of the service package and entitlements. Regular review and convergence meetings are conducted with the departments involved in service delivery. Reporting on system strengthening is activity-based (monthly for VHSNDs and biannually for trainings/refresher trainings) and overall programme reports are reviewed annually by the national government.

# Evaluation methodology

To test the delivery and impact of the Swabhimaan programme, baseline, midline and endline cross-sectional surveys were undertaken between 2016 and 2021 in three selected Indian states covering villages across five different sites. The baseline survey was conducted between October 2016 and January 2017 and included 6,352 adolescent girls, 2,573 pregnant women and 8,755 mothers of children under two years of age. The midline survey was conducted between September 2018 and June 2019 with 3,171 adolescent girls, 1,856 pregnant women and 3,277 mothers of children under two years. The endline survey will be conducted in 2021. Sample size calculations were conducted for each state that accounted for a 5% refusal rate and a design effect of 1.5. Respondents were recruited using a simple random sampling technique.

A standardised, bilingual quantitative questionnaire (in English and the local language) was administered to all target groups. Information obtained from the surveys included sociodemographic and household characteristics, educational attainment, diet diversity, household food security, the availability of a homestead kitchen garden and access to health, ICDS and SRLM services and decision-making practices. Anthropometric measurements (weight, height and MUAC) were taken using standard techniques. Quantitative data collected

was entered using the Census and Survey Processing System and analysed using STATA 15.1. A midline process evaluation was also undertaken using a mixed-method approach comprised of a cross-sectional survey and qualitative data collection. The impact evaluation has been registered with the Registry for International Development Impact Evaluations (RIDIE-STUDY-ID-58261b2f46876) and the Indian Council of Medical Research National Clinical Trials Registry of India (CTRI/2016/11/007482). The impact evaluation's endline survey and programme evaluation of Swabhimaan will be conducted in 2021.

## **Results**

### ***Progress of implementation***

Programme monitoring of Swabhimaan shows all 336 VOs across the three states developed integrated nutrition microplans that identified community priorities and actions. By the end of 2019, VOs had screened over 77,000 adolescent girls, pregnant women, mothers of children under two years of age and newlywed women using MUAC, identifying nearly 15,122 individuals at nutritional risk for customised counselling, home visits, food demonstrations, the development of a nutrition garden or backyard poultry and, for some, links with government social protection schemes. By the end of 2019, CRPs had facilitated a total of 37,079 monthly

meetings (maitri baithaks) across the intervention areas. Newlyweds had been oriented to maternal health issues in special biannual camps, provided with 'welcome kits' (contraceptives, IFA, sanitary pads, soap), inducted into SHGs and were mobilised to attend maitri baithaks. Over 1,000 adolescent groups have also been formed and are currently active across the three states.

VOs and CLFs have successfully collaborated with agriculture universities/training centres to design nutrition-sensitive farms and backyard gardens. Households with target individuals at nutritional risk have been prioritised to develop nutrition gardens in backyards and/or initiate poultry activities through small loans provide by the SHGs. By the end of 2019, over 5,000 nutrition gardens had been developed across the three states.

Swabhimaan has also successfully strengthened the supply side of health services by supporting a change in government policy that means that women are now screened for nutritional risk within VHSNDs, with those identified as being at risk then linked to the appropriate services. This has led to a significant increase in the participation of target groups in VHSND from 29.5% across the three states at the start of the programme to 85% by 2019.

## ***Changes in maternal and adolescent health and nutrition outcomes and practices***

Table 3 presents comparison results between the baseline and midline evaluations. Pre-intervention, the proportion of thin adolescent girls (BMI <-2SD) was 18.5% which reduced significantly to 13.8% ( $p < 0.001$ ) in 2019 after programme implementation. The proportion of thin mothers of children under two years (BMI <18.5 kg/m<sup>2</sup>) was 48.4% in 2016-17 (compared to the national average of 23%) and, by 2019, the proportion of thin mothers reduced to 44.6%. The mean MUAC among pregnant women was 23.5cm which increased to 24.0cm by 2019. Severe thinness among mothers of children under two years of age was 7.0% in 2016 which reduced to 6.5% by 2019 (Government of India cut-off for thinness in adults is <23 cm) (IIPS,2016a; IIPS,2016b; IIPS 2016c; Ministry of Health and Family Welfare, 2017).

In comparison to the baseline, a higher proportion of pregnant women (baseline 43.5%, midline 51.5%) and mothers (baseline 37.0%, midline 52.1%) achieved minimum dietary diversity scores than adolescent girls (baseline 41.3%, midline 48.0%) ( $p < 0.001$ ). At midline, all target groups showed significant improvement in IFA compliance as compared to baseline. The highest improvement was recorded among adolescent girls whose IFA consumption increased by 25.5% ( $p < 0.001$ ). At midline, a 5% increment in IFA compliance was registered among pregnant women and mothers, however, the overall consumption still remains low at 29.4% and 23.2%, respectively ( $p < 0.001$ ).

Data shows an 8-12% improvement in the proportion of women living in food secure households ( $p < 0.001$ ) from baseline to midline, however over 60% of women still lived in food insecure households. By midline, 71.9% of mothers' households had access to PDS entitlement as compared to only 60.7% at the baseline ( $p < 0.001$ ). At midline, about 40-43% of the target groups' households had improved toilets, with a 27%, 24% and 19% increase in adolescent girls', pregnant women's and mothers' households having an improved toilet ( $p < 0.001$ ). At baseline, only 31.6% of the adolescent girls used sanitary pads which had significantly increased to 57.3% ( $p < 0.001$ ) by the midline.

At midline, 51.2% of pregnant women and 34.1% of mothers had received an ANC in the first trimester and at least four ANCs in their last pregnancy respectively which corresponds to a 16-17% ( $p < 0.001$ ) improvement as compared to the baseline. The proportion of pregnant women who had their weight monitored during their current pregnancy (baseline 66.0%, midline 86.2%) and mothers whose weight was monitored at least four times during the last pregnancy (baseline 24.1%, midline 29.4%) increased ( $p < 0.001$ ). Pregnant women and mothers who received one dose of albendazole in their second trimester increased by 8-11% ( $p < 0.001$ ) by the midline. A drastic improvement was recorded in the proportion of mothers (baseline 29.7%, midline 60.4%) and pregnant women (baseline 23.8%, midline 55.4%)

who took calcium tablets in their second trimester ( $p < 0.001$ ).

The use of modern family planning methods among women was extremely low at baseline (pregnant women 7.1%, mothers 16.3%). However, modest improvements were recorded in the use of modern family planning methods by both pregnant women and mothers (4-6%,  $p < 0.001$ ) at midline. A slightly higher proportion of mothers attended at least three VHSNDs by midline (26.7%,  $p < 0.05$ ) than at baseline (24.4%). ICDS entitlements were better utilised and significant improvements were recorded in the utilisation of ICDS services by pregnant women (baseline 34.7%, midline 55.8%) and mothers (baseline 44.5%, midline 77.0%) ( $p < 0.001$ ). Mothers who opted for institutional delivery increased from 73.3% in 2016 to 76.4% by the baseline ( $p < 0.001$ ).

Midline qualitative results revealed that CRPs (Poshan Sakhis) conducted regular meetings, counselling and follow-ups with the target groups. Responses suggested that adolescent girls and pregnant women have adopted appropriate behaviours related to dietary intake and Water, sanitation and hygiene (WASH) practices and have increased the number of visits to health service points, such as Anganwadi Centres and VHSNDs, to access health and nutrition services. CRPs observed an increased awareness about the entitlements and services available and a visible change in the practice and



knowledge of the community on food and WASH behaviours. They also shared their experience of improved coordination with health service providers (AWW, ASHA and ANM) which supported access to services by the target groups. However, they reported challenges in mobilising target groups regularly for meetings and observed gender-related issues in the target groups, such as women eating least and last, a skewed division of labour in the household, domestic violence and low decision-making power as barriers to ensuring improved health and nutrition outcomes of women and girls.