

Shakti Varta Women's Groups using a Participatory Learning and Action Cycle in Odisha

Evaluation Immediately Post Intervention



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Acronyms

ASHA	Accredited Social Health Activist
ANMs	Auxiliary Nurse midwives
AWW	Anganwadi Worker
BFC	Block Finance Coordinator
CDPO	Child Development Project Officer
DFID	Department for International Development
DHFW	Department of Health and Family Welfare
DWCD	Department of Women and Child Development
FGD	Focus Group Discussion
FLW	Frontline Health Worker
GoO	Government of Odisha
GP	Gram Panchayat
HNWASH	Health, nutrition, water, sanitation and hygiene
HBD	High Burden Districts
ICDS	Integrated Child Development Scheme
IDI	In-depth Interview
NGO	Non-governmental organisation
OBCs	Other Backward Castes
OHSNP	Odisha Health Sector and Nutrition Plan
PLA	Participatory Learning and Action
MIS	Management Information System
NMR	Neonatal Mortality Rate
RD	Department of Rural Development
SC	Scheduled Caste
SHG	Self Help Group
SRP	State Resource Pool
ST	Scheduled Tribe
STA	State Level Technical Agency
TMST	Technical and Management Support Team
VHND	Village Health and Nutrition Days

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EXECUTIVE SUMMARY

This report presents the evaluation immediately post-intervention of Shakti Varta, a large scale participatory learning and action (PLA) intervention with women's groups in Odisha State, India. Shakti Varta is a convergent programme of the Government of Odisha involving the Department of Women and Child Development (DWCD), Department of Health and Family Welfare (DHFV), the Department of Rural Development (RD) and Mission Shakti. The UK Department for International Development (DFID) provided financial assistance to Shakti Varta's design and implementation from 2012 to 2016, and technical assistance was provided through the Technical and Management Support Team (TMST).

Background and evidence base

Shakti Varta was designed to build on the evidence that participation in women's groups using a facilitated PLA process in a low-resource setting reduces maternal and newborn mortality. A systematic review and meta-analysis of seven randomised controlled trials found that exposure to women's groups resulted in a 37% reduction in maternal mortality, a 23% reduction in neonatal mortality, and a 9% non-significant reduction in stillbirths (Prost et al, 2013). In 2014, WHO officially recommended the use of facilitated PLA with women's groups to improve maternal and newborn health in rural areas with low access to health services.

While the evidence of PLA impact is linked to maternal and newborn health outcomes, Odisha used the methodology to address a wider set of determinants. It adapted the PLA cycle to embrace a broader health, nutrition, water and sanitation and hygiene (HNWASH) focus. Like earlier trials in the region, Shakti Varta uses women's Self-Help Groups (SHGs) as a platform to engage with targeted women and to empower them and broader community people to address HNWASH issues. It seeks to improve maternal, newborn, child health and nutrition, and improve WASH practices to support these objectives.

The theory of change

The theory of change underpinning Shakti Varta is that through participation in a cycle of PLA meetings, women's knowledge about health, nutrition and water, sanitation and hygiene will increase and that women's enhanced confidence and solidarity resulting from their participation in meetings will, together with improved knowledge, support changes in family health practices. Moreover, information will be shared and discussed by participants outside of meetings so as to diffuse messages and build up community support for behaviour change and community action. Frontline health and nutrition workers (FLWs), namely ASHAs and AWWs, play an important role in supporting the mobilisation process and promoting better linkages between communities and basic health services, and responding to the expected increased demand for services. Similarly community leaders and institutions are important agents of change for Shakti Varta to work with to support change processes. SHG Federations provide the platform for the programme through their SHGs and support implementation and future sustainability of the initiative. Shakti Varta is expected to strengthen SHGs and block federations through their involvement in the programme.

The Shakti Varta intervention

The Government of Odisha launched Shakti Varta in 2013, identifying 15 High Burden Districts where infant mortality and child undernutrition was high. The first wave of implementation covers the three districts of Bolangir, Kandhamal and Rayagada, which were Shakti Varta's learning site for scaling up to Wave II districts.

Shakti Varta engages group participants in a reflective process, known as a PLA cycle, to identify and prioritise their local HNWASH problems, develop local strategies to address priority problems, take action, and review their achievements. The PLA cycle consists of 20 group meetings that are facilitated by a local SHG member who is trained as a facilitator for her Gram Panchayat (GP). Known as a GP Facilitator, she uses engaging interactive tools such as story-telling, picture cards and games, to lead the PLA meetings.

Unlike the PLA trials that typically included monthly PLA meetings, Shakti Varta planned on two weekly meetings and for the entire PLA cycle to be completed in approximately 12-20 months. The PLA cycle also includes two community meetings to mobilise community leaders, men and the broader community in the change process. These take place around the middle and end of the twenty meeting cycle.

Each group (known as a 'Shakti Varta point') covers a population of about 500 people with this ratio dropping to 300 in remote areas with scattered populations.

Evaluation purpose and methodology

As the evidence base for the PLA approach mainly comes from controlled trials, the overall aim of this evaluation was to assess the feasibility of implementing Shakti Varta through government and community structures at scale, and its effect on key secondary HNWASH indicators immediately post-intervention. The evaluation covers the three Wave I districts.

The evaluation employed a mixed methods approach and draws on the following data sources:

- Cross-sectional household survey data collected at baseline (2014) and towards the end of the 20 meeting PLA cycle (2016).
- Qualitative research undertaken at two intervals, the first early into implementation after meeting three had been completed (Grounding study) and the second, towards the end of the meeting cycle.
- Shakti Varta's Monitoring Information System which tracked implementation progress of PLA village meetings, meeting participation and changes reported.
- Process monitoring data and documentation collected during implementation by Shakti Varta's State Technical Agency.

Given that this evaluation is being conducted immediately post-intervention, its focus is on evaluating the implementation process, assessing the robustness of the pathway of change, and the effect of the intervention on a limited number of secondary HNWASH knowledge and practice indicators, community action and women empowerment. The evaluation does not include a control site and therefore the evidence presented does not show causality rather the contribution that Shakti Varta has made to reported changes. A later evaluation is

recommended to measure change in the primary outcome of neonatal mortality, a broader number of secondary outcome indicators than possible in the current assessment, as well as to evaluate performance of Wave II districts.

Evaluation findings on the scope and quality of implementation

This evaluation has identified a variety of design and implementation factors that has affected the quality of implementation and the potential of the programme to achieve results.

Timeline

WHO recommends PLA interventions with women's groups are applied for a minimum of three years. PLA meetings were held for 20 months in Bolangir and Rayagada and only 18 months in Kandhamal, due to implementation challenges and a fixed end of project closure date. Moreover, delays in fund disbursement meant that meetings were squeezed into very short 7-12 day periods in the latter half of the PLA cycle in order to complete before the end of DFID financial and technical support. The short span between meetings is likely to have impacted the quality of meetings and attendance, and affected the ability of participants to understand, absorb and translate messages into action.

Coverage

The large scale nature of the intervention in poor, geographically remote, Left Wing Affected and hilly locations presented major implementation challenges. Moreover, the inclusion of all blocks in the focal districts, as agreed with the government and DFID, meant that both areas with better and poorer health outcomes and access to services were included, though the evidence suggests that PLA is most effective in areas with higher mortality levels and poorer access to services.

Scope

The division of a 20 meeting PLA cycle into two mini-cycles was an innovative response to meeting a broad HNWASH agenda but carried the risk of making the PLA process too shallow for the breadth of behaviour change being promoted. Coupled with the very tight timeline exacerbated by fund related bottlenecks, feedback from the community suggests that insufficient time was available to explore difficult subjects at a reasonable pace for poorly educated rural women. This will most likely have affected understanding of messages and the readiness for women and their families to translate them into changed behaviours.

Motivation and retention of GP Facilitators

Mobilising women for meetings was difficult, time consuming and required considerable persuasion of GP Facilitators and the FLWs that supported them. Low remuneration of Rs 100 per meeting with no extra compensation for mobilising participants or undertaking the taxing journeys that they had to make to reach Shakti Varta points explains the relatively high dropout rate of about 25% of facilitators. In some cases, this impacted the quality of meeting facilitation and broader community mobilisation especially in the absence of funds to train new facilitators on training they had missed.

Low education standards

In remote areas where few rural women have completed more than a few years of schooling, GP Facilitators were selected with lower than the education criteria of 8 years of education and

required considerable handholding and mentoring. In future, a more systematic approach is needed to adapt the standard training packages and materials, supervision and support frameworks to the capability levels of lower educated facilitators.

Training and support

Good training and support of facilitators is an essential pillar of effective PLA. The cascade and interval training system was well designed and a pragmatic response to the scale related challenges of the programme. Partnership with local NGOs to fill human resource gaps in the government structure and the involvement of SHG Federations to provide block level personnel for supervision and training were creative solutions to creating decentralised, block level training and supervision capacity. However, funding bottlenecks experienced at the beginning of the cycle resulted in large gaps in cascading the training down, and significant delays in disbursing funds from the centre to the district in the second half of the cycle meant that one phase of residential training could not take place. These bottlenecks had a negative effect on training quality, the quality of facilitating meetings and mobilising communities, and the motivation of facilitators.

PLA games and picture cards

The quality, audience appeal and impact of the games and picture cards were reported by all stakeholders to be extremely high. These materials and the handbooks, training manuals and job aides are an important resource for the state and for communities, and there is high demand for the picture cards from ASHA and AWW to support their own work.

Monitoring and MIS

The intelligent use of online and offline MIS sought to overcome the challenges of monitoring a large scale community programme in remote areas with poor infrastructure and communication networks. Delays in data entry were however commonplace and the lack of a dedicated computer and office space at block level were significant barriers to an efficient MIS able to inform management in real time. The additional layer of field monitoring provided by Quality Managers positioned in each district raised implementation and reporting standards and highlights again the importance of field based supervision and support.

Funding and fund management

Management of Financial Assistance and Technical Assistance were both problematic areas for the programme that led to delays and undermined the motivation and interest of partners and the Shakti Varta field teams. The complex funding arrangement of Shakti Varta where funds were channelled through different state level government entities for block level activities implemented by teams of government and non-government staff who were themselves funded via different channels, was overly ambitious. The level of synchronisation of fund flows needed for a programme of Shakti Varta's scale and complex operational arrangements was not possible with the multiple funding flows and the inherent delays in transferring funds through the government system.

SHG Federations

Shakti Varta offered multiple benefits to Block level SHG Federations, helping to revive fledging organisations, building their capacity and in turn credibility with communities. SHG Federations now have greater capacity to contribute to the sustainability of Shakti Varta than pre-

intervention, but this is a medium to long term goal that will require continued technical and financial support to achieve.

Evaluation findings on the results from the intervention

Despite implementation challenges, the evaluation indicates that Shakti Varta has likely contributed to some improvements in HNWASH indicators, enhanced community action and women's empowerment.

Level of participation

The household survey data found 20% of pregnant women and women with a child under five respectively, have participated in a Shakti Varta meeting, although that the frequency of attendance was generally low at 1-3 meetings. A further 15% of pregnant women and 22% of women with a child under five had ever heard of Shakti Varta meetings but had not attended. Qualitative research also found that women reported low attendance at meetings.

The barriers to participation documented through qualitative data and process documentation help to explain the participation levels, though these are comparable with participation rates in much smaller trials, where participation by pregnant women ranged from 2-51%¹). First and foremost the livelihood demands on women and men make them unavailable for meetings during the day; in fact very few men attended any meetings due to their daily labour. Women reported household chores as the second reason why they could not attend meetings. Unsuitable timing of the meeting was the next important barrier to participation with women stating a preference for evening meetings; timing also impeded participation by adolescent girls who were at school during the day. Women from far-flung hamlets were often not able to attend due to distance and the difficulty and time required to travel to Shakti Varta points. The added frequency of meetings in the latter half of the cycle further hindered participation with meetings requiring more of women's time.

The low attendance and the low frequency of attendance has implications for the extent to which the meetings can influence behaviours and build solidarity and support among women to empower them to support behaviour change. To some extent this may be offset by the diffusion of messages. However, increasing participation, continuity of attendance and the potential for holding meetings later in the day and evening needs attention by programme managers.

Who participates in meetings?

The household survey found that out of the sample of pregnant women and women with a child under five interviewed, the proportion of Scheduled Tribe and Scheduled Caste women who reported to have attended Shakti Varta meetings was slightly lower than for other caste groups. However as women from Scheduled Tribes and Scheduled Castes represented around two thirds of the women interviewed the actual numbers of women who reported attending were highest from these groups. The MIS shows that 72% of participants are from Scheduled Tribe and Schedule Castes. The local recording by the GP Facilitator of participants at the meeting itself and the lack of incentive to encourage false reporting of participant's caste or tribal status suggest that the MIS data is reliable on this point.

¹ Prost et al. Women's groups practicing participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet*. 2013;381(9879):1736-46.

The FLW survey and the MIS both show high levels of AWW and ASHA participation in Shakti Varta meetings. Qualitative data also shows that FLWs played a critical role in supporting GP Facilitators, mobilising women to attend meetings, explaining messages during meetings, and working with the facilitator to track target groups, including high risk pregnancy cases and advocate for their well-being with family members. Shakti Varta encouraged collaborative working of the three field based agents which helped AWWs and ASHAs in achieving their own work targets.

Diffusion

The qualitative study's quantitative tracking of the diffusion of Shakti Varta messages found that the disseminator of information frequently shared information. The most common persons she shared information with were family members (59%), neighbours (31%) and then friends (10%). Information was most often shared within the home and in the evening.

The findings on diffusion suggest that women who attend meetings are diffusing information as per the theory of change, but this is primarily remaining within the family home. Increasing the attendance of women at meetings from those households where there are no meeting participants will therefore be important to spread the information to a larger share of households in the community.

Reported changes in knowledge and awareness related to pregnancy and infant and young child feeding (IYCF)

The household surveys from 2014 and 2016 show modest increases in the few indicators for which data is available on changes in knowledge and awareness related to pregnancy and IYCF. Data from Stories of Most Significant Change show how Shakti Varta has created space for women to share information on infant and child feeding, when previously such discussion was mostly confined to the home. Women reported to welcome the opening up of space for discussion, the new opportunity to share experiences, seek inputs from one another, clarify doubts and access to 'expert opinion'.

Reported changes in maternal and child health practices

Among all pregnant women interviewed in the household surveys in 2014 and 2016 there was an increase in registration of pregnancies at AWCs, pregnant women receiving a take home ration from AWCs and pregnant women taking rest.

The most common practices reported by pregnant women who attended Shakti Varta meetings taking more rest (80%), sleeping under a bed net (68%), and improving handwashing (47%). Pregnant women who had only heard of Shakti Varta meetings but not attended reported similarly high levels of improved practices in the same areas. These findings suggest that attendance at Shakti Varta meetings and diffusion of messages from those meetings is contributing to improved behaviours among pregnant women.

Women with children under five who attended Shakti Varta meetings reported adopting improved newborn care practices with over 50% stating they put the baby to the breast within an hour of birth, and wiping, wrapping and delayed bathing of the newborn. Women with children under five who had ever heard of Shakti Varta meetings but not attended also reported improved practices with 49% reporting that they fed the baby colostrum.

Qualitative data illustrate the process through which participation in meetings is raising awareness and how Shakti Varta group participants, facilitators and FLWs are actively tracking target women to improve maternal health practices and advocate for them with family members. Although data is from a small number of examples, the case story material illustrate how the Shakti Varta platform is nurturing bonds between women, and the active role that facilitators and FLWs are taking to promote better pregnancy outcomes.

Reported changes in hygiene and sanitation knowledge and practices

Mothers of children under five reported increased hand washing at critical moments and increased safe disposal of their own and their children's faeces between 2014 and 2016. There was no similar improvement in adolescent girl's handwashing and sanitation practices. This coincides with similar findings in the CLS evaluation, and the very low attendance of adolescents in Shakti Varta meetings.

The household surveys show a significant improvement in FLWs knowledge of the five critical moments for handwashing, rising five-fold between 2014 and 2016. FLW use of an appropriate cleansing agent during handwashing improved from 80% in 2014 to 99% in 2016. FLW disposal of their own faeces between the two surveys did not however change.

Qualitative data from Shakti Varta participants strongly asserts that Shakti Varta has increased awareness of the harm of open defecation, changed community understanding about the benefits of using toilets, stimulated many people to start building toilets and for those who had toilets, to start using them. The 2016 survey of FLWs also found that close to a third of FLWs reported that Shakti Varta raised awareness of building toilets.

The combined data suggests that Shakti Varta is contributing to the increasing awareness and practice of better handwashing and safer sanitation.

Reported changes in community action

The 2016 household survey found that among those women that had attended a Shakti Varta meeting, some 48% had been involved in some form of community activity after attending a meeting. This high level of community activity corresponds to the findings from qualitative and process documentation that shows how participation in meetings is building women's confidence to ignite and participate in mobilising communities behind social and HNWASH agendas.

Reported changes in women's empowerment

Household survey data found little change in indicators related to women's decision-making authority in the home, but improvement in women's decision making over personal issues and in the perception that women like them can change things in their community.

Qualitative data shows the process through which Shakti Varta is building women's confidence to express their opinions, take part in family discussions and village meetings. Case stories also show how GP Facilitators have gained confidence and status through their work, increased their influence in their homes and communities and are taking on leadership roles. Empowering rural women from Odisha is a long term process being addressed through many development programmes including Mission Shakti and improving human development outcomes in the

State. Shakti Varta appears to be contributing to this process of change not least through building the capacity and influence of 5800 community based facilitators trained to promote HNWASH messages and mobilise women and the community to support behaviour change.

Value for money

Shakti Varta is economical and a cost-efficient behaviour change communication intervention in comparison to Government of India norms. Assuming a person who attends a Shakti Varta meeting disseminates messages to four or more other persons, the cost per person of raising awareness is INR 5 (£0.05). In comparison, the Government of India norm for BCC activities under the National Rural Health Mission/National Health Mission is INR 10 (£0.10) per person. Evidence of effectiveness and sustainability are not feasible at this early stage of evaluation.

Conclusion

The mixed results from this evaluation immediately post-intervention reflect the challenges of implementing a large scale community mobilisation programme embedded into government systems and structures and the creative solutions that were implemented to fill related gaps and capacities. Delays in fund flow were the most critical bottleneck that undermined implementation progress and quality. Going forward, as the government plans to complete the PLA cycle in Wave II districts and sustain the gains from Shakti Varta, streamlining the flow of funds through the government system needs priority attention. Delays in the flow of funds need to be resolved to avoid delays in implementation, the resultant demotivation of field teams and loss of momentum and quality of community interactions.

Two important and possibly interrelated lessons have been that the time span between meetings was too short during the second half of the PLA cycle, and that the number of target women attending meetings needs increasing to expand reach. Monthly meetings as common in the PLA trials seems to be a more realistic time period given the livelihood and daily pressures on women's time and better corresponds to the WHO recommendation of a minimum three year implementation window. Changing the timing of meetings and in some areas the locations will likely be necessary to increase attendance especially of women living in far-flung areas. This will however add additional challenges for facilitators and further underlines the need for a review of the compensation they receive. Tailored approaches for challenging operational contexts such as Left Wing Affected areas and remote pockets also need to be considered.

As per the theory of change we find that pregnant women and women with children under five that participated in meetings report improvements in pregnancy and newborn care practices, and improved handwashing, and this is also reported from similar target group women that had heard about meetings but not participated. Evidence suggests that Shakti Varta is contributing to improved awareness of and practice of safer sanitation. There is also evidence that participation contributes to community action and the building of women's agency and self-confidence. Shakti Varta has actively engaged AWWs and ASHAs in the community mobilisation process and fostered collaborative working between them and GP Facilitators. It has also strengthened the capacity of Block level SHG Federations. These are indications that at this early stage of evaluation, the theory of change is robust. Later evaluation to capture the results of Wave II and changes in the primary outcome of neonatal mortality is recommended.

The evaluation documents the challenges and feasibility of taking PLA to scale through government and community systems and structures, and the trade-off between a narrow versus broader focused PLA cycle. Government of Odisha has committed to completing the cycle of meetings in Wave II after DFID financial and technical support has closed. This will require commitment to sustain the core supporting systems of cascade and interval training, regular field supervision and support at the block level, field monitoring and the MIS. Reduced investment in any of these core areas will reduce the quality of implementation and the potential outcomes.

1 PROGRAMME DESCRIPTION AND RATIONALE

1.1 The shift towards community-based approaches

Internationally, the perceived failure of top-down supply-driven programmes to deliver accessible and inclusive services has renewed interest in community-based approaches over the past decade². Community-based participatory approaches to promoting health are recognised as a critical strategy in addressing health inequities among socially disadvantaged and marginalised communities. Well-designed community-based projects have the potential to be more inclusive of poor and marginalised groups, to empower communities, be more responsive to community priorities, and strengthen linkages between civil society and government³.

Despite improvements in maternal and child health outcomes, in 2012 Odisha state continued to suffer from high maternal and neonatal mortality, high levels of child under-nutrition and widespread open defecation. Against a backdrop of improving service coverage and many years of health systems strengthening in the state, it became increasingly recognised by government and development partners that addressing family practices and the underlying social determinants of poor health and nutrition were key to further improving outcomes in the state. As a result, increased importance was given to community-based approaches and behaviour change under the Odisha Health Sector and Nutrition Plan (OHSNP).

1.2 Participatory learning and action (PLA) with women's groups: the evidence base

Randomised controlled trials in India and Nepal have shown that community mobilisation through women's groups can reduce neonatal mortality and improve maternal health. Through a participatory planning process with women's groups – a form of participatory learning and action (PLA) cycle – community mobilisation reduced neonatal mortality in Jharkhand and Odisha in India⁴, and likewise in Nepal⁵.

The evidence is strong that participation in women's groups using a facilitated PLA process in a low-resource setting reduces maternal and newborn mortality (Table 1). A systematic review and meta-analysis of seven randomised controlled trials found that exposure to women's groups resulted in a 37% reduction in maternal mortality, a 23% reduction in neonatal mortality, and a 9% non-significant reduction in stillbirths. A subgroup analysis of four of these seven trials in which at least 30% of pregnant women participated in groups showed a 55% reduction in

² Tom Slaymaker, Karin Christiansen and Isabel Hemming. February 2005. Community-based approaches and service delivery: Issues and options in difficult environments and partnerships. Overseas Development Institute. <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/3822.pdf>

³ Narayan, Deepa (1995) Designing Community Based Development. Washington DC: World Bank; Alkire, S. et al. (2004) 'Community-Driven Development', CDD Chapter of the World Bank PRSP Sourcebook.

⁴ Tripathy P., et al., "Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Odisha, India: a cluster-randomised controlled trial", *Lancet* 2010; published online on March 8, 2010.

⁵ Manandhar DS., Osrin D, Shrestha BP., et al., "Effect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster randomised controlled trial", *Lancet* 2004; 364: 970-79.

maternal mortality. PLA has been shown to be a cost-effective strategy in low-resource settings⁶. In 2014, WHO officially recommended the use of facilitated PLA with women's groups to improve maternal and newborn health in rural areas with low access to health services. WHO noted that PLA interventions should be implemented for a minimum of three years, have sufficient coverage of the population, and include good training and support of facilitators for maximum impact.

In Jharkhand and Odisha, EKJUT, an Indian non-governmental organisation (NGO), implemented a cluster-randomised controlled trial to demonstrate the impact of a PLA cycle on neonatal mortality. Women's groups met on a monthly basis for a course of 20 meetings⁷. A local woman who had been identified by the community and trained by EKJUT facilitated these meetings. Facilitators used PLA methods such as picture-cards, games, role play and story-telling to guide meetings and to encourage discussions about the problems faced by mothers and infants, and develop strategies for prevention, home care, and seeking treatment. Selection of the women's groups and the meeting place to hold the PLA cycle meetings sought to maximise access to the meeting. The meetings were not exclusive to the members of the specific women's group, and non-members, including men and local stakeholders, were encouraged to join in and over time opened up to reach a wider community audience and stimulate community commitment to improve health practices. Linkages between the women's groups and village level health committees were also important in channelling community voices and in seeking a response from health services.

By encouraging community consciousness, and solidarity to act on particular issues, community mobilisation has the potential to address the social determinants of health, and the social norms and power dynamics that influence care practices and health care access. Qualitative evidence from the Makwanpur project in Nepal⁸ shows how the PLA approach fosters the confidence of participants to promote change among their families and peers, resulting in health gains being amplified across hamlets and communities. Moreover, by targeting excluded and vulnerable groups, community mobilisation through women's groups has shown to "get below" to include and empower groups that are at risk of exclusion from development. The transformational potential of community mobilisation is particularly important in considering how to address the social determinants of malnutrition and the gendered social norms that underpin food distribution and child-feeding practices.

⁶ Prost A et al. (2013). Women's groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet*. 2013 May 18; 381(9879): 1736–1746.

⁷ Rath S., et al., Explaining the impact of a women's group led community mobilization intervention on maternal and newborn health outcomes: the Ekjut trial process evaluation. *BMC International Health and Human Rights* 2010, 10:25

⁸ Morrison J., et al. (2010). "Understanding how women's groups improve maternal and newborn health in Makwanpur, Nepal: a qualitative study", *International Health* 2 (2010) 25–35.

Table 1: Characteristics of cluster-randomised controlled trials using women’s groups practicing PLA to improve maternal and newborn health in low-income settings⁹

	Study population and setting	Intervention	Control	Outcomes
Manandhar et al, 2004¹⁰(Nepal)	24 clusters; population of about 7000 per cluster Closed cohort of married women of reproductive age (15–49 years) living in Makwanpur district, rural Nepal; pregnancies registered during Nov 1, 2001, to Oct 31, 2003, were followed up	12 clusters (2972 births) Each cluster had a local literate female facilitator who was given a brief training in perinatal health issues and a facilitation manual; facilitators supported women’s groups through ten monthly meetings using a participatory learning and action cycle and a picture card game that addressed prevention and treatment for typical problems in mothers and infants; one supervisor supported three facilitators Health service strengthening and training of traditional birth attendants were as in the control group	12 clusters (3303 births) Health service strengthening activities and training of traditional birth attendants: primary health centres given resuscitation equipment, phototherapy units, and warm cots; essential newborn-care training for local health staff and traditional birth attendants; and newborn-care kits given to community-based workers	Primary: neonatal mortality rate Secondary: stillbirth rate, maternal mortality ratio, uptake of maternity services, care practices at home, neonatal morbidity, and health-care seeking
Tripathy et al, 2010¹¹(India)	36 clusters; mean population 6338 per cluster (SD 2101) Open cohort of women aged 15–49 years, living in rural areas of three districts of Jharkhand and Orissa, eastern India, who gave birth between July 31, 2005, and July 30, 2008	18 clusters (9770 births) A local woman facilitated 20 monthly meetings with women’s groups after 7 days of training; each facilitator convened 13 groups per month; groups followed a four-phase participatory learning and action cycle and were open to all members of the community though primarily targeting pregnant women and new mothers Facilitators and group members used stories, participatory games, and picture cards to facilitate discussions about prevention and care-seeking	18 clusters (9260 births) Health service strengthening activities: health committees formed so community members could express opinions about local health services; committees met every 2 months to discuss maternal and newborn health entitlement issues; and workshops using appreciative inquiry provided to frontline	Primary: neonatal mortality rate and maternal depression scores Secondary: stillbirths, maternal mortality ratio, and perinatal mortality, uptake of maternity services, care practices at home, and health-care seeking

⁹ Prost A et al. (2013). Women’s groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet*. 2013 May 18; 381(9879): 1736–1746.

¹⁰ Manandhar DS, Osrin D, Shrestha BP, et al, members of the MIRA Makwanpur trial team. Effect of a participatory intervention with women’s groups on birth outcomes in Nepal: cluster randomised controlled trial. *Lancet* 2004; **364**: 970–79.

¹¹ Tripathy P, Nair N, Barnett S, et al. Effect of a participatory intervention with women’s groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial. *Lancet* 2010; **375**: 1182–92

	Study population and setting	Intervention	Control	Outcomes
		Health service strengthening was as in the control group	government health staff	
Azad et al, 2010¹²(Bangladesh)	18 clusters; mean population 27 953 per cluster (SD 5953) Open cohort of women aged 15–49 years living in three rural districts of Bangladesh, who gave birth between Feb 1, 2005, and Dec 31, 2007	9 clusters (15 695 births) A local woman facilitated groups using a participatory learning and action cycle after receiving five training sessions that covered communication, maternal and neonatal health issues; she visited every tenth household in the intervention clusters and invited married women of reproductive age to join the groups; mothers-in-law, adolescent girls, and other women joined at a later date Health service strengthening and training of traditional birth attendants were as in the control group	9 clusters (15 257 births) Health service strengthening activities and training of traditional birth attendants: improvements to referral systems and links between communities and health services; and provision of basic and refresher training in essential maternal and newborn care	Primary: neonatal mortality rate Secondary: maternal mortality ratio, stillbirths, perinatal mortality rate, uptake of maternity services, care practices at home, neonatal morbidity, and health-care seeking
More et al, 2012¹³(India)	48 clusters; mean population 5865 per cluster (SD 1077) Women were recruited between Oct 1, 2006, and Sept 30, 2009, in urban Mumbai slums; women from transient communities and areas for which resettlement was being negotiated were excluded	24 clusters (9155 births) A facilitator (local woman with secondary education and leadership skills) set up ten groups in a cluster of 1000 households; groups met fortnightly, and the facilitator met weekly with other facilitators and her supervisor; women's groups followed a cycle of 36 meetings and were open to all women. Participatory methods with seven phases, based on the principles of appreciative inquiry, were used in the meetings	24 clusters (9042 births); no details were provided about control clusters	Primary: stillbirths, neonatal mortality rate and extended perinatal mortality rate, perinatal care, and maternal morbidity Secondary: maternal mortality ratio, antenatal care, institutional delivery, breastfeeding, and care-seeking for newborn illness
Lewycka et al, 2013¹⁴(Malawi)*	48 clusters; mean population 3958 per cluster (SD	24 clusters and 9374 births in factorial analysis, 12 clusters and 3129 in	24 clusters and 9749 births in overall analysis; 12	Primary: neonatal, perinatal, and

¹² Azad K, Barnett S, Banerjee B, et al. Effect of scaling up women's groups on birth outcomes in three rural districts in Bangladesh: a cluster-randomised controlled trial. *Lancet* 2010; **375**: 1193–202.

¹³ More NS, Bapat U, Das S, et al. Community mobilization in Mumbai slums to improve perinatal care and outcomes: a cluster randomised controlled trial. *PLoS Med* 2012; **9**: e1001257.

¹⁴ Lewycka S, Mwansambo C, Rosato M, et al. Effect of women's groups and volunteer peer counselling on rates of mortality, morbidity, and health behaviours in mothers and children in rural Malawi (MaiMwana): a factorial, cluster randomised controlled trial. *Lancet* 2013; **381**: 1721–35.

	Study population and setting	Intervention	Control	Outcomes
	404) A cohort of women aged 10–49 years in Mchinji district, rural Malawi, who delivered a child between Feb 1, 2006, and Jan 31, 2009	stratified analysis for women's groups Women's groups were supported by a female facilitator through a participatory learning and action cycle of 20 meetings Facilitators were local, literate women aged 20–49 years; they were trained for 11 days, with refresher training every 4 months, and supported by one supervisor per six facilitators Meetings followed a four-phase participatory learning and action cycle; group membership was restricted to women, but expanded to men in later stages Health service strengthening was as in the control group	clusters and 3329 births in stratified analysis for women's groups Health service strengthening activities: health workers received training in essential newborn care and safe motherhood; neonatal resuscitation equipment donated to all facilities; a project for prevention of mother-to-child transmission of HIV introduced in 2005 was scaled up to all facilities by 2008	infant mortality rates, and maternal mortality ratio Secondary: maternal and infant morbidity, use of skilled maternity services, immunization, malaria prophylaxis, use of prevention of mother-to-child transmission services, and breastfeeding
Colbourn et al, 2013¹⁵(Malawi)**	32 clusters; mean population of 3934 per cluster (SD 1332) An open cohort of pregnant women was recruited from three rural districts of Malawi between Oct 1, 2008, and Dec 31, 2010; women were excluded if they were living in urban areas, or areas with facilities providing comprehensive emergency obstetric care or non-functioning facilities	15 clusters (10329 births); 81 volunteer facilitators supported by nine MaiKhanda study staff, each formed a women's group that followed a participatory learning and action cycle to improve maternal and neonatal health	17 clusters (10 247 births): no details reported	Primary: maternal mortality ratio, and perinatal, and neonatal mortality rates Secondary: institutional delivery, percentage of maternal deaths subjected to audit, case fatality rates, practice of signal obstetric-care functions
Fottrell et al, 2013¹⁶(Bangladesh)	Clusters were the same as in Azad et al14 An open cohort of	9 cluster (9106 births) In addition to the 162 women's groups already set up previously (Azad et al14), 648 new groups were	Nine clusters (8834 births) Health service strengthening:	Primary: neonatal mortality rate Secondary:

¹⁵ Colbourn T, Nambiar B, Bondo A, et al. Effects of quality improvement in health facilities and community mobilization through women's groups on maternal, neonatal and peri-natal mortality in three districts of Malawi: MaiKhanda, a cluster randomised controlled effectiveness trial. *Int Health* (in press)

¹⁶ Fottrell E, Azad K, Kuddus A, Younes L, Shaha S, Nahar T. The effect of increased coverage of participatory women's groups on neonatal mortality in Bangladesh: a cluster-randomised trial. *JAMA* (in press)

Study population and setting	Intervention	Control	Outcomes
women residing in three rural districts of Bangladesh, who were permanent residents of the union in which their delivery was identified from January, 2009, to June, 2011; temporary residents were excluded	formed by newly recruited facilitators to increase population coverage; from January, 2009, the new groups followed a participatory learning and action cycle with monthly meetings about maternal and newborn health Health service strengthening was as in the control group	provision of basic medical equipment to local facilities; training of traditional birth attendants in essential newborn care; and refresher training in essential newborn care for physicians	stillbirth, perinatal mortality rate, pregnancy-related mortality, institutional delivery, home-care practices, and health-care seeking
*2×2 factorial, cluster-randomized controlled trial of volunteer peer counselling support for breastfeeding and infant care.			
**2×2 factorial, cluster-randomized controlled trial of quality improvement of health facilities.			

1.3 Development and implementation of Shakti Varta

1.3.1 Shakti Varta’s objectives

The Government of Odisha’s exposure to the EKJUT trial and awareness of the growing evidence base around PLA provided fertile ground for a new community-based initiative. The development of a state strategy for behaviour change and the identification of 12 priority behaviours for convergent action provided the opportunity for an intensive and long-term community based approach such as PLA.

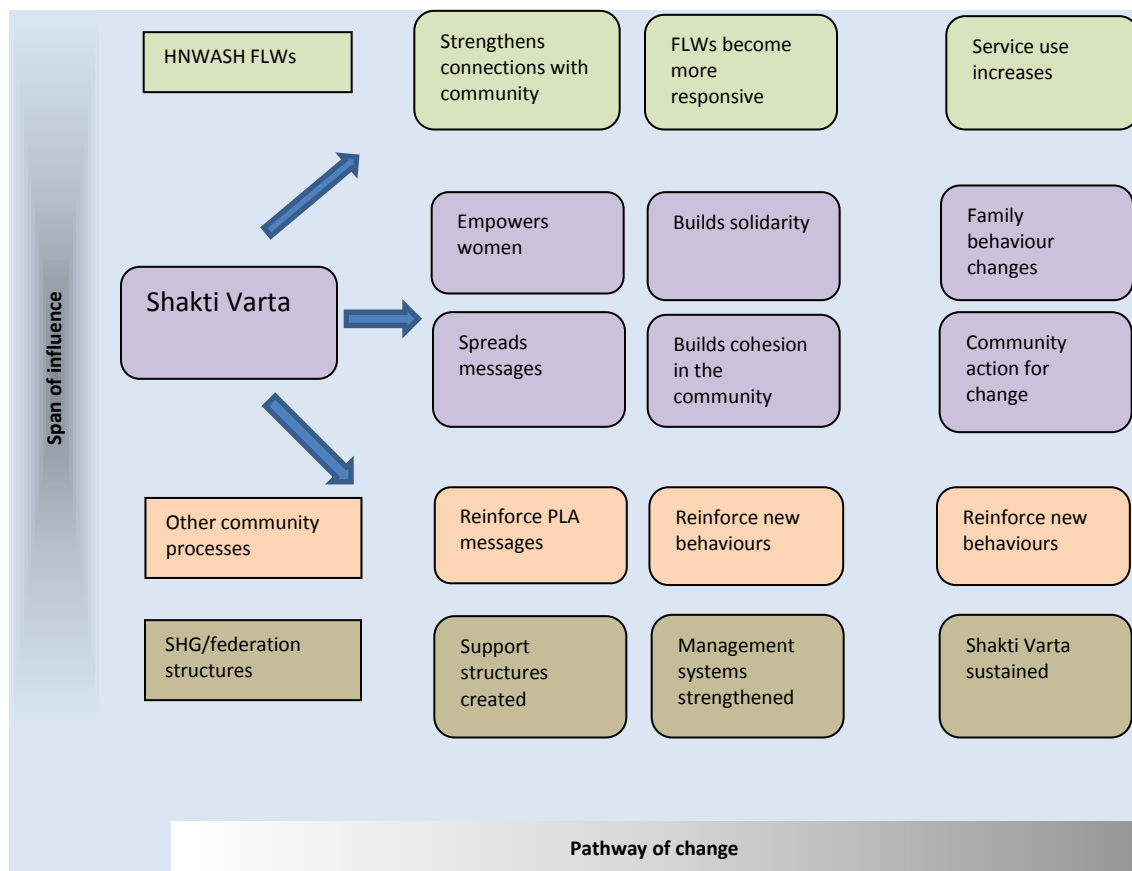
While the evidence of PLA impact is linked to maternal and newborn health outcomes, Odisha decided to use the methodology to address a wider set of determinants. It adapted the PLA cycle to embrace a broader health, nutrition, water and sanitation and hygiene (HNWASH) focus. Building on the enabling policy environment, Shakti Varta (which means harnessing women’s collective power through discussion and dialogue) was developed as a large-scale convergent programme of the Department of Health and Family Welfare (DHFV), Department of Women and Child Development (DWCD), the Department of Rural Development (RD) and Mission Shakti. The Department for International Development (DFID) provided financial assistance to Shakti Varta’s design and implementation phase from 2012 to 2016 and technical assistance was provided through the Technical and Management Support Team (TMST).

Like the earlier EKJUT trial, Shakti Varta uses women’s Self-Help Groups (SHGs) as a platform to engage with targeted women and to empower them and broader community people to address HNWASH issues. It seeks to improve maternal, newborn, child health and nutrition, and improve WASH practices to support these objectives. Shakti Varta targets pregnant women, women with children under five and adolescent girls, and seeks to involve older women and men who are often gatekeepers of family practices.

The theory of change behind Shakti Varta is presented in Figure 1 below. Through participation in a cycle of PLA meetings, it is expected that women’s knowledge about HNWASH will increase

and that women’s enhanced confidence and solidarity resulting from their participation in meetings will, together with improved knowledge, support changes in family health practices. Moreover, information will be shared and discussed by participants outside of meetings so as to diffuse messages and build up community support for behaviour change and community action. Health and nutrition frontline health and nutrition workers (FLWs), namely ASHAs and AWWs, play an important role in supporting the mobilisation process and responding to the expected increased demand for services. Similarly community leaders and institutions, such as Gaon Kalyan Samities¹⁷ and Jaanch Committees and Mother’s Committees¹⁸ are important agents of change for Shakti Varta to work with to support change processes, and it is expected that Shakti Varta will connect and stimulate their support. Other community processes and programmes, such as Mamata¹⁹ are also expected to reinforce the behaviour changes promoted at Shakti Varta meetings. SHG Federations provide the platform for the program through their SHGs and support implementation and future sustainability of the initiative. Shakti Varta is expected to strengthen SHGs and block federations through their involvement in the programme.

Figure 1: Shakti Varta theory of change



¹⁷ Gaon Kalyan Samities are Village Health and Sanitation Committees established under the National Rural Health Mission: http://nrhmorissa.gov.in/pdf/Gaon_Kalyan_Samiti.pdf

¹⁸ Jaanch Committees and Mother’s Committees are community committees established by ICDS to support implementation and monitoring of programme activities.

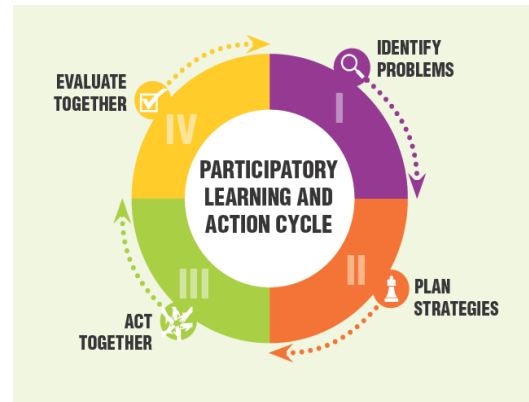
¹⁹ The Mamata scheme provides conditional cash transfers to pregnant and lactating women in four instalments over 12 months, the aims of which include increasing the utilisation of maternal and child health services such as ANC.

1.3.2 The Shakti Varta PLA approach

Shakti Varta engages group participants in a reflective process, known as a PLA cycle, to identify and prioritise their local HNWASH problems, develop local strategies to address priority problems, take action, and review their achievements (Figure 2).

Figure 2 Shakti Varta participatory learning and action cycle

The PLA cycle consists of 20 group meetings that are facilitated by a local SHG member who is trained as a facilitator for her Gram Panchayat (GP). Known as a GP Facilitator, she uses engaging interactive tools such as story-telling, picture cards and games, to lead the PLA meetings.



Unlike the PLA trials that typically included monthly PLA meetings, Shakti Varta planned on two weekly meetings and for the entire PLA cycle to be completed in approximately 12-20 months.

The PLA cycle also includes two community meetings to mobilise community leaders, men and the broader community in the change process. These took place around the middle and end of the 20 meeting cycle.

FLWs attend PLA meetings to promote better linkages between communities and basic health services and foster convergence at the community level in a way that benefits community people.

Each group (known as a 'Shakti Varta point') covers a population of about 500 people with this ratio dropping to 300 in remote areas with scattered populations.

1.3.3 Geographical coverage and phasing

Shakti Varta has been rolled-out to Odisha's 15 High Burden Districts (HBD) selected on the grounds of high infant mortality and child under-nutrition. Given the innovative nature of the initiative the Government of Odisha (GoO) decided to implement Shakti Varta in two waves:

Wave I included the first three districts of Kandhamal, Bolangir and Rayagada situated in the south and west of Odisha. Implementation was launched in April 2013 and PLA meetings were held from June 2014 in Bolangir and Rayagada and from August 2014 in Kandhamal, and ended in February 2016.

Wave II covered the remaining 12 HBDs of Angul, Bhadrak, Gajapati, Jharsuguda, Koraput, Malkanagiri, Nawarangpur, Kalahandi, Nuapada, Sundargarh, Keonjhar and Sambalpur. Implementation was launched in April 2015 and PLA meetings were held from September 2015 and the first ten meetings were completed in February 2016 with financial and technical assistance from DFID and the TMST. As DFID and TMST support has now ceased, the GoO has decided to complete the remaining 10 meetings in the 12 High Burden Districts using Government funds.

In total, Shakti Varta has covered 152 Blocks, 2799 Gram Panchayats, 24,000 villages and around 1,40,000 SHGs in Odisha.

1.3.4 Wave I districts: the focus of the evaluation

The focus of this evaluation immediately post-intervention is the 37 blocks from the three Wave I districts which completed implementation in February 2016 (Figure 3, Table 2). Wave I districts acted as a learning site to adapt and strengthen Shakti Varta’s implementation processes and supporting systems, and to feed learning into the scaling up to the 12 Wave II districts. Table 3 outlines the geographic and socio-demographic characteristics of the three districts. Note that out of the 37 blocks covered, one block (K.Nuagan in Khandhamal district) also received the Community Led Total sanitation intervention which aims to improve village level open defecation free status.

Figure 3 Three Wave I districts of Shakti Varta implementation



Table 2 Shakti Varta Wave I evaluation blocks

District	Number of blocks	Block names
Khandhamal	12	BALIGUDA, CHAKAPAD, DARINGIBADI, G.UDAYAGIRI, K.NUAGAN, KHAJURIPADA, KOTAGARH, PHIRINGIA, PHULBANI, RAIKIA, TIKABALI, TUMUDIBANDH
Rayagada	11	BISSAMCUTTACK, CHANDRAPUR, GUDARI, GUNUPUR, KALYANSINGPUR, KASIPUR, KOLNARA, MUNIGUDA, PADMAPUR, RAMANAGUDA, RAYAGADA
Bolangir	14	AGALPUR, BALANGIR, BANGOMUNDA, BELPARA, DEOGAON, GUDVELLA, KHAPRAKHOL, LOISINGA, MURIBAHAL, PATNAGARH, PUINTALA, SAINTALA, TITLAGARH, TUREKELA

Table 3: Geographic and socio-demographic characteristics of Wave I districts

<p>Kandhamal District is situated in the southern west region of Odisha. The district has a total area of 8021 km², out of which 5709.83km² areas is covered by forest. Kandhamal has two subdivisions (Phulbani, and Balliguda); with 12 tehsils, 12 blocks and 153 Gram Panchayats. The total number of villages in the district according to the 2011 Census is 2587, out of which 170 villages are uninhabited. According to the 2011 census, the total population of the district was 733,110, of which 359,945 persons were males and the rest 373,165 were females. The population density of the district is 91 inhabitants per square km. Out of the total population, 65.1% are literate. The caste and tribal distribution of the district includes 45.9% Scheduled Tribes and 14.9% Scheduled Castes. Most of the inhabitants belong to the Kandha and Khonds Tribe. The district is highly affected by Maoist insurgents.</p>
<p>Rayagada District is located in the southern region of Odisha. The district has a total area of 7,584.7 km², out of which 4785.36km² areas is covered by forest. Rayagada is divided into eleven blocks and has 171 Gram Panchayats. The total number of villages in the district as of 2011 Census is 2665, out of which 197 villages are uninhabited. According to the 2011 census, the total population of the district was 967,911, of which 471,960 persons were males and the rest 495,951 were females. The population density of the district is 136 inhabitants per square km. Out of the total population, 50.9% are literate. The caste and tribal distribution of the district includes 47.9% Scheduled Tribes and 11.9% Scheduled Caste. The population of this district consists mainly of Tribals. The Kondhas or Kondhs form the majority of population followed by Souras. The district is highly affected with Maoist insurgents.</p>
<p>Bolangir District is situated in the western region of Odisha. The district has a total area of 6575 km², out of which 1543.85 km² areas is covered by forest. The District has been divided into three Sub-Divisions and 14 Blocks. There are 285 Gram Panchayat with 1,794 Villages out of which 30 are uninhabited. According to the 2011 census, the total population of the district was 1,648,997, of which 8,30,097 persons were males and 8,18,900 were females. The population density of the district was 251 per square. km. Out of the total population, 64.7% are literate. The caste and tribal distribution of the district includes 21.1% Scheduled Castes, followed by 17.9% Scheduled Tribes and there is a large number of people from Other Backward Classes (OBC). The Tribal people residing in the district are mainly Kandha, Kutia, nad Binjhal. The district is highly affected with Maoist insurgents.</p>

1.3.5 Shakti Varta implementation structure

Unlike PLA trials, which were implemented by local research NGOs in small geographical areas, Shakti Varta is implemented through existing government systems and structures across all 15 HBDs. It leverages the human resources of the Integrated Child Development Scheme (ICDS) and Mission Shakti Block level SHG Federations. A 2012 institutional assessment of women SHGs and their federations identified Block Level SHG Federations as a more vibrant platform than those at Panchayat and District level to mobilise and support women SHGs in implementing a community-based HNWASH intervention. SHGs provided Block trainers/supervisors, selected facilitators, provided the funding route to get money to the block level to pay facilitators, and other roles as described further below. Additional supervisory and capacity building support at the block and district levels is provided by NGO implementing partners while TMST and a State Level Technical Agency (STA) provide technical assistance at state and district levels.

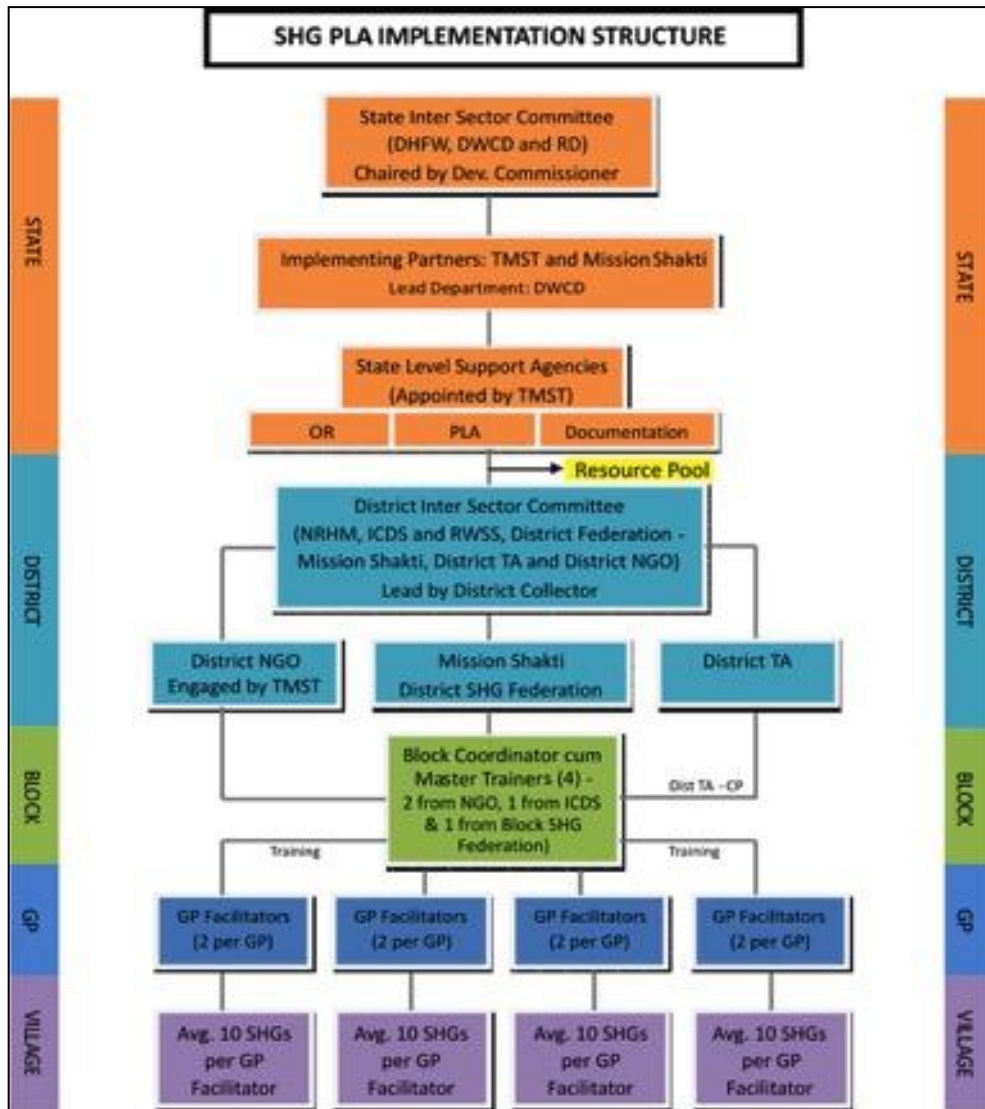
A. STATE LEVEL

Oversight and leadership of the OHSNPs community process programme, and Shakti Varta as a component of it, rests with the State Inter-Sector Committee chaired by the Development Commissioner and including the three nodal sectors of Department of Health and Family Welfare, Department of Women and Child Development and Rural Development. Figure 4 shows the institutional arrangement of Shakti Varta.

DWCD is the lead department, and implementation is supported by Mission Shakti, TMST and a STA that is responsible for leading and developing training and related materials, programme management, quality assurance, knowledge management, documentation and implementation monitoring. A pool of 30 State Resource Persons drawn from across 15 districts provide master training and a technical resource to the programme.

- Shakti Varta delivery structure:
- 5,800 Gram Panchayat (GP) level Facilitators
 - 608 Block Coordinators cum trainers
 - 152 Block Finance Coordinators
 - 1 state Resource Pool of 30 master trainers

Figure 4: Shakti Varta Implementation Structure



B. DISTRICT LEVEL

At the district level, technical assistance team from TMST, the NGO implementing partner, and staff of the STA support the government, manage, implement and monitor the programme (Table 4). The Nutrition Operational Plan team placed by DWCD in high burden districts also play a key role.



C. BLOCK LEVEL

In each block there is a team of four Block Coordinators (two from the implementing NGO, one from ICDS and one from the Block SHG Federation) who are the primary trainers and supervisors of GP Facilitators. They deliver phased training to GP Facilitators to build their capacity to deliver PLA meetings, provide guidance and support through monthly review meetings at the block level, and undertake community visits to observe and support PLA meetings. Block Coordinators monitor implementation progress against block level micro-plans.

D. VILLAGE LEVEL

Village women who are trained as GP Facilitators are the key agents of Shakti Varta. The women are identified through a structured process of nomination with the support of the SHG Block Federation. Links to the local SHG and Block Federation are important for sustaining and supporting the women who become facilitators and change agents in the long run. Selection criteria include proficiency in communication, and basic reading and writing ability, as the ability to conduct and manage village meetings is a key requirement.

Table 4: Shakti Varta Implementation Team at District, Block and Gram Panchayat Levels

Implementer	District-level	Block-level	Gram Panchayat-level
TMST	SHG PLA Coordinator District Programme Officer Finance and Operations Officer	-	-
TMST recruited NGO	District Programme Coordinator	2 Block coordinators 1 Block Finance Coordinator	-
DWCD	District Social Welfare Officer	Child Development Project Officer 1 Block Coordinator (Supervisor)	-
State Technical Agency (STA)	Quality Assurance Manager	-	-
SHG Federation	-	1 Block Coordinator	2 GP Facilitators per GP

1.3.6 PLA meeting plan

To accommodate the broad range of HNWASH topics, Shakti Varta's PLA cycle of twenty meetings was divided into two mini cycles (Table 5). The first mini-cycle focuses on maternal and newborn health and the second mini-cycle on nutrition, water, sanitation and hygiene issues. Specific content issues related to health, nutrition and WASH are earmarked for each meeting

but in addition, the group reviews progress with implementing strategies for addressing prioritised problems at each meeting, and rehearses priority messages such as hand washing. The meeting plan for Wave II districts was slightly revised to give greater attention to WASH in the first mini-cycle.

Table 5: Shakti Varta 20 Meeting Plan for Wave I Districts

Cycle	Phase	Meeting No.	Content	Method	Issues being addressed	
CYCLE A - MATERNAL & NEWBORN HEALTH PROBLEMS	PHASE I - IDENTIFYING AND PRIORITIZING PROBLEMS	1	Introduction to the project + understanding social inequity, exclusion and discrimination in society + strengths of groups	Stick game, power walk game	Social inequity, exclusion	
		2	Identifying newborn and maternal problems in the community	Interactive discussion using picture cards	Identification of danger signs related to maternal & newborn illnesses and its management	
		Community visit - Members enquire about problems relating to maternal and newborn health in the community				
	PHASE II - PRIORITIZATION OF STRATEGIES	3	Prioritizing newborn and maternal problems in the community	"Voting" game		
		4	Understanding causes and solutions for prioritized problems	Story telling and but why? game	Social determinants, gender, other cultural practices	
		5	Identifying and prioritising strategies for implementation	Bridge game	Prevention and treatment of maternal & newborn problems	
		6	Assigning responsibilities, deciding on indicators and methods for measuring progress	Format discussion	Empowerment, unity, ownership	
		7	Planning for a larger community meeting	Interactive discussion	Dissemination, involvement of wider community and ownership	
	Preparation and community meeting I					
	PHASE III - IMPLEMENTATION OF STRATEGIES	8	Reviewing the progress of implementation of strategies and discussing birth preparedness and breast feeding	Picture card game and demonstration	Antenatal, safe delivery, hygiene, neonatal care, early and exclusive breastfeeding,	
9		Reviewing the progress of implementation of strategies and identifying and classifying neonatal infections	Game	Illness identification, prevention & treatment		
MATERNAL & NEWBORN HEALTH STRATEGIES REVIEWED AT THE START OF EACH MEETING IN CYCLE B						
CYCLE B - NUTRITION, WATER, SANITATION AND HYGIENE ISSUES	PHASE I - IDENTIFYING & PRIORITIZING ISSUES	10	Understanding the intergenerational malnutrition cycle	Mapping nutrition throughout the life cycle + group discussion	Gender discrimination, current practices regarding nutrition	
		11	Identification and prioritisation of problems leading to malnutrition	'What is it' game and voting	Gender discrimination, current practices regarding nutrition	
	PHASE II - PRIORITIZATION OF STRATEGIES	12	Understanding causes and solution for the 1 st 2 prioritised problems	Story telling	Feeding difficulties, exclusive breast feeding,	
		13	Understanding causes and solution for the next 2 prioritised problems			
		14	Identification of strategies for the	Bridge game	Improving complementary	

			prioritised problems leading to malnutrition		feeding, breast feeding, hand washing and hygiene, using bed nets etc.
		15	Assigning responsibilities	Format discussion	
Preparation and GP federation level community meeting					
PHASE III - IMPLEMENTATION OF STRATEGIES		16	Reviewing and updating strategies and mapping available food resources in the village/community	Demonstration & mapping of locally available food	Complementary feeding, dietary diversity
		17	Reviewing and updating strategies and discussing the importance of timely weaning	Preparation of recipes	Frequency, quantity & quality of complementary feeding, hygiene, dietary diversity
		18	Reviewing and updating strategies and reinforcing possible strategies for improving nutrition & growth	Card game/materials	Complementary feeding, hygiene, illness prevention and treatment, care during illness
		19	Reviewing and updating strategies and understanding the Faecal Oral Transmission Routes	Defecation mapping	Water, sanitation and hygiene
PHASE IV - EVALUATION OF CYCLE A & B		20	Evaluation of Self Help Group activities by group members	Game, dissemination	Impact

1.3.7 Cascade model of training

A cascade model of residential training was used in order to train the several thousands of community based GP Facilitators (two facilitators are engaged per GP) and the Block Coordinators that supported them. Training was broken down into five phases across the PLA cycle so that new information could be shared, skills developed over time, and training sessions used to discuss and solve issues emerging from the community. This also considered the limited educational background of most facilitators and supported them with retention of skills and knowledge. The cascade model followed the five phases of training and started with Resource Persons training the State Resource Pool (SRP). The SRP was made up of a team of district resource persons from TMST, the implementing NGO, the State Technical Agency and the Nutrition Operational Plan. The district team then trained Block Coordinators at district level, who then train GP Facilitators at block level. Trainers are supported through the Shakti Varta Online Resource Centre (SVRC) and the Block Resource Centre.

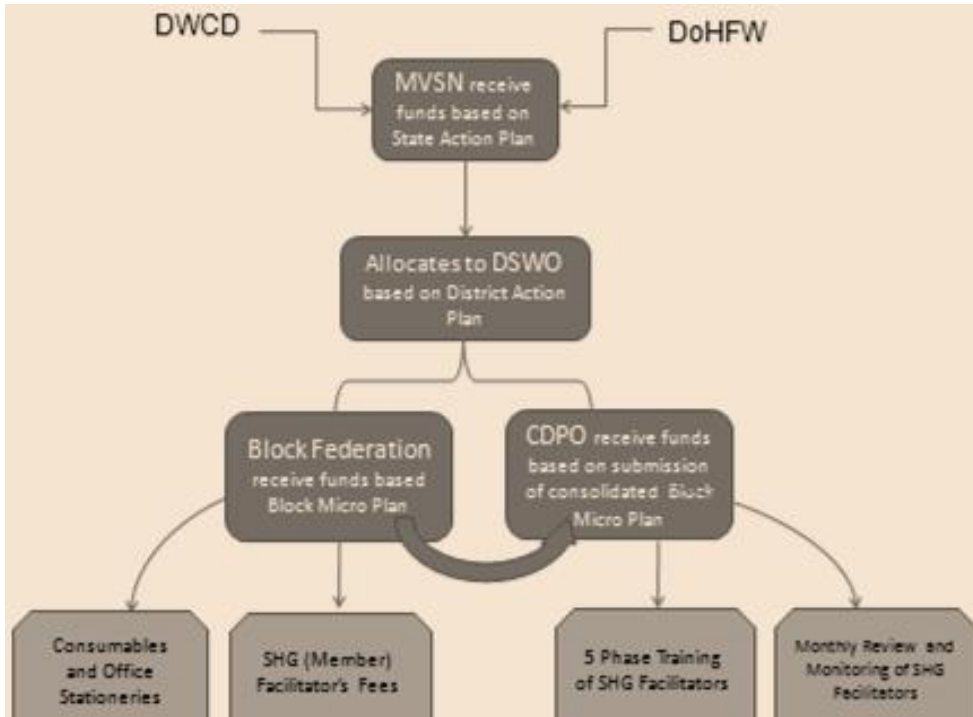


1.3.8 Fund flow mechanism

The Government of Odisha and DFID provided financial support for the implementation of Shakti Varta through DWCD and DHFW (Figure 5). Financial allocations from both departments

were transferred to Mahila Vikash Samabaya Nigam (MVSN)²⁰ who released the funds to the District Social Welfare Officer (DSWO). The DSWO provided funds to the Block Federation and to the Child Development Project Officer (CDPO) at block level to support training and monitoring of GP Facilitators, facilitator fees, and consumables and office stationery. TMST funded local NGO partners and the STA.

Figure 5: Shakti Varta fund flow mechanism



²⁰ Mahila Vikash Samabaya Nigam is the apex cooperative body implementing Mission Shakti.

2 SHAKTI VARTA IMPLEMENTATION COVERAGE IN WAVE I DISTRICTS

Shakti Varta's Management Information System (MIS) is a valuable source of implementation and management information that tracks intervention coverage, attendance at meetings by participation by target groups according to caste/tribal status. See section 4 for further discussion on the MIS.

2.1.1 Shakti Varta Coverage

Table 6 shows the number of Shakti Varta points in Wave I districts, broken down by population covered in each block and district. Shakti Varta achieved its intended coverage of having one Shakti Varta point per 500 population members in all districts and in most blocks. Only six out of the 37 blocks (16%) had a Shakti Varta point catering to slightly over this.

Based on learning from the grounding of the programme, this coverage target was reduced to 1:300 population in remote GPs and where the population was more scattered in order to increase women's access to Shakti Varta points.

Overall, across the three districts included in Wave 1, each Shakti Varta point catered to an average of 442 members of the population.

Table 6: Shakti Varta coverage

District	Block	Population (Rural) 2011 Census	Expected number of SVP (One SVP per 500 population)	SVPs according to MIS	Actual population coverage per SVP
BOLANGIR	AGALPUR	96342	193	192	502
	BALANGIR	102952	206	235	438
	BANGOMUNDA	111330	223	228	488
	BELPARA	128916	258	336	384
	DEOGAON	97645	195	184	531
	GUDVELLA	57406	115	171	336
	KHAPRAKHOL	93557	187	222	421
	LOISINGA	89713	179	215	417
	MURIBAHAL	114839	230	235	489
	PATNAGARH	130783	262	285	459
	PUINTALA	111635	223	283	394
	SAINTALA	114775	230	293	392
	TITLAGARH	118942	238	251	474
	TUREKELA	82781	166	164	505
Total	1451616	2903	3294	441	
KANDHAMAL	BALIGUDA	57894	116	91	636
	CHAKAPAD	43892	88	106	414

District	Block	Population (Rural) 2011 Census	Expected number of SVP (One SVP per 500 population)	SVPs according to MIS	Actual population coverage per SVP
	DARINGIBADI	102262	205	242	423
	G.UDAYAGIRI	30621	61	71	431
	K.NUAGAN	53113	106	116	458
	KHAJURIPADA	51470	103	103	500
	KOTAGARH	51828	104	129	402
	PHIRINGIA	83428	167	195	428
	PHULBANI	39948	80	76	526
	RAIKIA	51854	104	95	546
	TIKABALI	49405	99	104	475
	TUMUDIBANDH	45116	90	101	447
	Total	660831	1322	1429	462
RAYAGADA	BISSAMCUTTACK	84091	168	206	408
	CHANDRAPUR	41129	82	87	473
	GUDARI	42737	85	87	491
	GUNUPUR	76333	153	180	424
	KALYANSINGPUR	59093	118	172	344
	KASIPUR	140633	281	312	451
	KOLNARA	73839	148	168	440
	MUNIGUDA	85218	170	201	424
	PADMAPUR	56459	113	121	467
	RAMANAGUDA	52632	105	111	474
	RAYAGADA	108781	218	265	410
Total	820945	1642	1910	430	
Grand Total		2933392	5867	6633	442

KEY:

Green <= 500 members of population per SV point

Red >500 members of population per SV point

2.1.2 Progress of meetings by district

According to the MIS, a total of 6633 Shakti Varta points exist across the three Wave I PLA districts.

A total of 119,892 meetings were conducted across the three districts throughout the implementation of the programme. Meetings were delayed in all three districts due to the late release of Financial Aid funds from DWCD that delayed training of facilitators and subsequent meetings being held; this issue will be discussed further in chapter 4.

Table 7 shows the progress of each district towards the total number of meetings they should have achieved if each of their Shakti Varta Points had achieved its goal of 20 meetings in the PLA

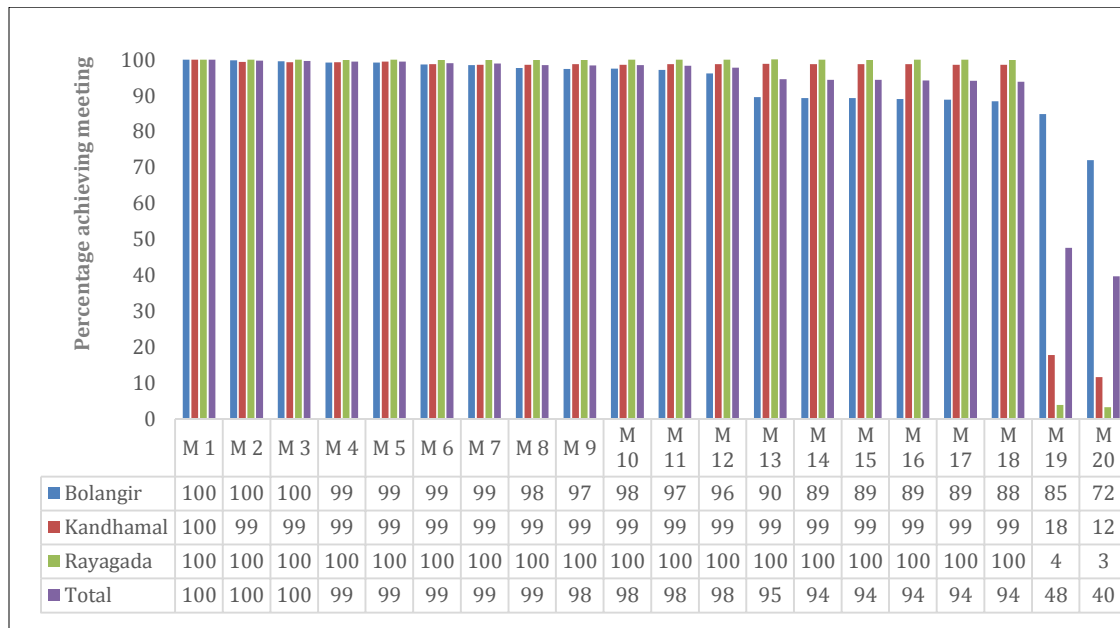
cycle. Overall, the three districts achieved 90.4% of their expected 20 meetings by February 2016.

Table 7: Progress of meetings by district as of end-February 2016

District	Total no. SV points according to MIS	Total no. meetings expected per district if each SVP achieves 20 meetings	Total no. of SV point meetings actually conducted according to MIS (as of end-Feb 2016)	% of meetings completed out of the expected 20 meeting cycle (as of end-Feb 2016)
Balangir	3294	65880	61601	93.5%
Kandhamal	1429	28580	24581	86.0%
Rayagada	1910	38200	33710	88.2%
Total	6633	132660	119892	90.4%

By the end of February 2016, 94% of the Shakti Varta Points had completed their 18th out of 20 meetings in the PLA cycle according to the MIS data (Figure 6). In Rayagada, 100% of Shakti Varta Points had completed their 18th out of 20 meetings.

Figure 6: Percentage of meetings held (as of end-February 2016)



3 EVALUATION PURPOSE, SCOPE, OBJECTIVES

3.1 Evaluation purpose, scope and objectives

As the evidence base for PLA using women's groups mainly comes from controlled trials, the overall aims of this evaluation was to assess the feasibility of implementing Shakti Varta through government and community structures at scale, and its effect on key secondary HNWASH indicators immediately post-intervention.

The evaluation covers the three Wave I districts which was Shakti Varta's learning site for scaling up to 12 Wave II districts.

The evaluation employed a mixed methods approach and draws on the following data sources:

- Cross-sectional Household survey data collected at baseline (2014)²¹ and towards the end of the 20 meeting PLA cycle (2016).
- Qualitative research undertaken at two intervals, the first early into implementation after meeting three had been completed (Grounding study) and the second, towards the end of the meeting cycle.
- Shakti Varta's MIS.
- Process monitoring data and documentation collected during implementation by Shakti Varta's STA.

Given that this evaluation is being conducted immediately post-intervention, its focus is on evaluating the implementation process, assessing the robustness of the pathway of change (see Table 8 below), and the effect of the intervention on a limited number of individual level HNWASH knowledge and practice indicators, community action and women empowerment. The evaluation does not include a control site and therefore the evidence presented does not show causality rather the contribution that Shakti Varta has made to reported changes.

In light of the above, the primary objectives of this evaluation are to:

- Evaluate the effect of Shakti Varta in improving key individual level HNWASH indicators, community action and women's agency and empowerment²².

²¹ The 2014 survey data was collected as part of Concurrent Monitoring 2 data collection which included all 314 blocks of Odisha.

²² Additional secondary outcome indicators not included in this evaluation include institutional delivery, skilled birth attendance, post-natal care, and indicators for essential newborn care practices. In the household surveys, these indicators and NMR were only assessed on women who had a birth outcome in a specified recall/reference period. The 2016 survey was originally intended to provide consecutive yearly estimates on key HNWASH indicators and serve as post-intervention evaluation tool for the 44 CLS and SV blocks. For comparability with the 2014 survey which used a reference/recall period of January to December 2013, the 2016 survey used a reference period of January to December 2014. Due to delays in rolling out Shakti Varta (see subsequent sections), the intervention did not reach full coverage of meeting one until November 2014, meaning that that women with a birth outcome in the reference period would have had extremely limited exposure to the intervention during their pregnancy.

- Generate evidence that Shakti Varta can be implemented at scale, considering the quality of implementation, coverage and community participation.
 - To identify barriers and enablers to effectively implementing Shakti Varta including through the diffusion of PLA messages through social networks.
 - To identify the extent to which Shakti Varta complemented other HNWASH interventions in the area.
 - Make recommendations for improving program effectiveness based on the findings of the evaluation during and immediately post intervention.
 - To inform and support the potential for scaling-up of PLA through government structures, pending their success

The original primary evaluation outcome of Shakti Varta was to assess change in Neonatal Mortality Rate (NMR) however this is not being assessed in the current evaluation. Evidence suggests that the potential impact of PLA on NMR is unlikely to be realised until 2-3 years from baseline²³. One reason for this is that PLA aims for community-wide diffusion of good practices and information sharing between PLA members to non-members within the same geographical clusters, which take time; a time lag would also be expected between changes to behavioural practices and there being a measurable effect on outcomes such as NMR.

A later evaluation is recommended to measure change in the primary outcome, a broader number of secondary outcome indicators than possible in the current assessment, as well as to evaluate performance of Wave II districts.

Table 8 Shakti Varta pathway of change and the focus of this evaluation immediately post intervention

Shakti Varta Pathway of Change				Focus of evaluation immediately post intervention	Proposed expanded focus in any future evaluation
Participation in SV meetings	Empowers women	Builds solidarity	Increases HNWASH knowledge and practices	Participation in SV meetings Quality of SV implementation HNWASH knowledge of SV participants Select HNWASH practices of SV participants Women empowerment	More comprehensive practice indicators of SV participants Changes in neonatal mortality
	Diffusion of messages	Builds cohesion in the community	Increases community action for change	Diffusion of messages Community action	Social cohesion and inclusion
Linkages with	Strengthens	FLWs become	Service use	Participation of	Changes in use

²³ Tripathy et al. Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial. *Lancet*. 2010;375(doi:10.1016/S0140-6736(09)62042-0):1182–92.

FLWs	FLW connections with the community	more responsive	increases	FLWs in SV meetings Support provided by FLWs to SV	of selected health and nutrition services
Other community processes	Reinforce PLA messages	Reinforce new behaviours		Community action	Sustained community action
SHGs / Federation structures	SV support structures created	Management systems strengthened	Shakti Varta sustained	Strengths and weaknesses of SV implementing systems Benefits to SHG federations	Benefits to SHGs Sustainability

4 METHODOLOGY

As mentioned, this early endline evaluation used a mixed methods approach drawing on a range of quantitative and qualitative data sources outlined below.

4.1 Cross-sectional household surveys – 2014 and 2016

Data on key secondary outcome indicators were collected in population representative cross-sectional household surveys conducted in 2014 at baseline prior to Shakti Varta implementation, and near endline (2016). Both surveys followed the same design and methodology, full details of which are available in the CCM2 survey report²⁴, however key information is provided below.

Survey design and sampling

The original evaluation plan for Shakti Varta was to cover 52 intervention blocks and 52 matched control blocks to test the effectiveness of the intervention with a quasi-experimental study design. The 2014 survey sample size was designed around this evaluation plan. Delays in Shakti Varta implementation since the 2014 survey have meant a shift in the evaluation design to follow a pre-post methodology without a control group, focusing on the first three wave I districts receiving Shakti Varta since July 2015.

The 2014 survey covered all 314 blocks of Odisha, as part of routine monitoring and surveillance on key health, nutrition and WASH indicators, but also served as the quantitative baseline for the nested PLA evaluation. The survey design and sampling approach were developed with support from an independent statistician. The statistician also guided the process of calculating the required sample size for the Shakti Varta evaluation (as per original roll-out plans), and to generate reliable block-level estimates in intervention and non-intervention areas²⁵. For further information on sample size calculations for CCMII, please see the CCMII final report.

The 2016 survey was implemented to provide immediate endline estimates for Shakti Varta, and a separate WASH intervention – Community Led Sanitation. Data collection in 2016 was therefore completed for 44 of the 314 blocks in Odisha, covering the 9 districts in which CLS and Shakti Varta Phase-1 interventions are being implemented.

The surveys focus on rural areas (covering remote to peri-urban areas), excluding urban centres. The method ensures proportionate representation of remote and vulnerable HHs which may be missed in other surveys. Both surveys used a stratified multi-staged cluster sampling methodology in which the selected blocks served as strata and the sampling frame consisted of all inhabited villages within these blocks. A list of villages to be visited was sampled from the

²⁴ Odisha Technical and Management Support Team. (2015). *Concurrent Monitoring II: Odisha state survey 2014-15*. Options Consultancy Services LTD, IPE Global, CARE India.

²⁵ Sample size calculations in Shakti Varta blocks was based on detecting a 17% reduction in neonatal mortality from 30 per 1000 to 25 per 1000 with 80% power and 5% significance level.

Odisha Primary Census Abstract 2011 (excluding uninhabited villages) independently by the statistician.

In all blocks, half of the GPs were sampled, and then half of the villages (in intervention blocks according to the original quasi-experimental design) or one fifth of the villages (in remaining non-intervention blocks) were sampled. Only a few of the 37 Wave I Shakti Varta blocks were included in the original quasi-experimental design, this meant that around one fifth of villages were sampled in the majority of blocks.

At selected villages all HHs were invited to participate according to the eligibility of residents, and all people from all subgroups were invited to complete the relevant questionnaire. In each selected village a detailed mapping exercise took place in which all HHs spread across all the hamlets were identified and listed. Frontline health workers and ward members (or village headmen or opinion leaders) were consulted to confirm the initial mapping produced. All listed HHs were then visited for an initial screening (a brief questionnaire taking approximately five minutes) to identify residents in the subgroups of interest (see list of respondent groups below). If any respondent groups were present, or it was a HH where there had been a death to a woman 15-49 or a child under-five in the reference period, then the HH was eligible for the survey, and the relevant interviews took place after appropriate consent procedures.

In order to ensure comparability between surveys, and increase the power with which to assess change, the 2014 and 2016 surveys were implemented using exactly the same methodology, including the same GPs, and villages. Due to the above, no additional sample size calculations were required for the 2016 survey, and sampling files were shared with the data collection agency listing all of the blocks, GPs, and villages that were covered in CCMII for the 44 intervention blocks. Key reasons for this were that visiting the same villages is a better option for assessing change (than for example, re-sampling), which is a key objective of the survey given the nested PLA and Community Led Sanitation interventions. Using the same villages allows detection of (real) change by avoiding the possibility of collecting follow-up data from villages that might have had worse or better baselines. Furthermore, there is a gain in power because data from baseline and follow-up is essentially 'matched' within villages. Additionally, visiting the same villages means that that we would be more likely to see consistent estimates between blocks and districts at time 1 and 2.

Questionnaires and key respondents

Data was collected through two instruments, a household and Frontline Health Worker (FLW) survey. The same questionnaire was used in both the 2014 and 2016 surveys. Questions were based on selected indicators from the DFID logframe, previous CCM survey in 2011 and other key surveys in India, recent policy changes, and outcomes expected to improve as a result of CLS and PLA.

The following overlapping groups constituted the key respondents:

- Currently pregnant women
- Women who gave birth in the reference period (1st January 2013-31st December 2013 for CCM2; 1st January 2014 – 31st December 2014 for CCM3) irrespective of the survival status of their child
- Mothers with living infant under 2 years

- Mother with living infants under 5 years
- Adolescent girls 10-19.

Households where a woman 15-49 years old or a child under-five years had died in the reference period (1st January 2013-31st December 2013) were also eligible, even if there were no living respondent groups. The separate FLW survey involved interviews with Accredited Social Health Activist (ASHAs), Auxiliary Nurse Mid-wife (ANMs) and Angan Wadi Worker (AWWs).

Where a woman was a member of more than one subgroup then she completed all relevant questionnaires. The only exception to this was in the case of adolescent girls where, to make the sample size manageable, interviews of adolescent girls (10-19 years) were restricted to every third household with an adolescent girl.

If a woman from a subgroup of interest resided there, but was away from home at the time of visit, then the interview team returned at a time suggested by other HH other members to attempt to obtain the interview. If there was no answer at a HH, the interview team returned at least three times before recording the HH as a non-responder.

It was anticipated that in each intervention block around 500 women with recent birth in the reference period would be identified and interviewed. Some other target subgroups (e.g. pregnant women) were smaller, and others (e.g. women with child under five years) were much larger e.g. up to 5 times bigger.

Sampling for FLW survey

The sampling for the FLW survey was linked to the sampling for the HH survey. In each sampled village the interview team aimed to interview one ASHA and one AWW. If there was more than one ASHA or ANM in a village then they were randomly selected. In some instances, the FLW was also an eligible HH level respondent – in which case she was prioritised for the HH interview and was not included in the FLW survey.

The interview team also aimed to interview all of the ANMs linked to each sampled village. As each ANM covers a larger catchment area than a single village there are fewer ANMs in the CCM sample compared to ASHAs or AWWs. Again, if an ANM was also eligible for the HH survey she was prioritised for the latter.

The separate FLW survey involved interviews with ASHAs, ANMs and AWWs.

Training of data collectors

Due to the large-scale nature of the survey we outsourced the data collection and management to research agencies (different agencies for 2014 and 2016 surveys). Agency and TMST staff were involved in training of the data collectors using training manuals developed for the training of trainers (TOT), before the main training of investigators and supervisors. Master trainers (trained at the TOT) were responsible for training investigators. Each training session was delivered over 6 days by two master trainers, one IT trainer and one a quality assurance person. The first training session was also attended by 20 district coordinators and TMST staff.

Survey equipment

Data was collected using mobile tablets. Each investigator was given a CAPI tablet programmed with a bilingual (English and Odiya) version of the questionnaire. The data collected through the CAPIs was directly uploaded to the server. TMST had access to the raw data via the server and were able to conduct data quality checks.

Data collection

The 2014 baseline survey was implemented between March 2014 and February 2015 and the 2016 early endline survey implemented between January and March 2016, after meeting 18 had been reached.

Data collection teams comprised of two mappers and listers who also assisted with anthropometric measurement, 4-5 female investigators, and one supervisor. GPS location was recorded twice within each village during data collection to enable monitoring of the location of field teams.

Before the survey began, supervisors, mappers and listers sought the help of ward members to identify the boundaries of villages selected, including hidden hamlets, and to draw up village maps. All HHs were listed and assigned a unique HH ID number, written in white chalk on the house. The five minute screening tool was conducted to identify eligible HHs; the team returned to empty HHs at least three times to attempt the screening exercise before recording the HH as a non-responder.

Investigators were given lists of consenting HHs to visit each day and conducted the interviews. All respondents were given information about the survey and provided voluntary informed consent prior to interview. Girls 10-14 years of age were interviewed in the presence of a suitable adult from the HH. Data were uploaded to password protected servers by supervisors at the end of each day.

Quality assurance consultants

Whilst the data collection agency had internal data quality assurance protocols in place, 10 external quality assurance consultants and one Senior Quality Assurance Consultant were recruited by TMST, whose main purpose was to provide an independent appraisal of the quality of investigator data collection and to feedback their findings to TMST. QA consultants also attended the training of data collectors to gain a deeper understanding of the expectations of the different cadres of field staff.

Secondary outcome indicators

Secondary HNWASH outcome indicators measured at the individual level covered the following thematic areas:

- Knowledge of and attendance at Shakti Varta meetings
- Who attends Shakti Varta
- Community action following Shakti Varta
- Knowledge and practice of key health, nutrition and WASH factors

- Women’s agency and empowerment

Data preparation and analysis

Data was cleaned by both TMST and the implementing agencies. TMST created the majority of indicators in SPSS (2014 data) and STATA version 11.2 (2016 data), and analysis was completed using STATA version 11.2.

Block weights were calculated to account for the differential sampling of villages within GPs (e.g. 50% of villages’ vs 20% of villages). The block weights ensured that blocks with fewer villages sampled were not under-represented in the overall estimates, and that blocks with a larger number of villages sampled were not over-represented. Weights were added at the block level rather than GP level in order to reduce the variability in the weights and therefore maintain good precision. Weights were calculated as the inverse of the probability of being selected in the sample.

During analysis, the block weights and clustering of outcomes within villages were accounted for using complex surveys analysis in STATA using the svyset command. Prevalence estimates presented are un-adjusted for potential confounders.

4.1.1 Household survey respondent group sample sizes and background characteristics (2014 and 2016)

The response rates and background characteristics of key respondents groups in the 2014 and 2016 surveys are presented in Table 9 and Table 10 below. Key respondent groups included adolescent girls 15-19 years (married and unmarried), currently pregnant women, and mothers of children under-five.

The within household response rate was high for most respondent groups of interest as shown. Unmarried adolescent girls had the lowest response rate, probably due the girls being at school when the household interviews took place. The total number of unique key respondent interviews was 34,364 in 2014 and 34,857 in 2016.

Table 9 Within household response rates for respondent groups of interest

Respondent group	2014			2016		
	Eligible to participate	Interviewed	Response rate	Eligible (includes refusals and women not present)	Interviewed	Response rate
Pregnant women	3,806	3,735	98.1%	3,344	3,305	98.8%
Women with a child <5	21,341	21,341	100%	22,139	21,875	98.8%
Adolescent girls 15-19 (married; no pregnancy or child)	703	622	88.5%	403	351	87.1%

Adolescent girls 15-19 (unmarried; no pregnancy or child)*	6,893	4,370	63.4%*	8,311	4,564	54.9%*
Adolescent girls 10-14(unmarried; no pregnancy or child)*	7,984	4,296	53.8%*	9,663	4,762	50.7%*

*It was planned that one third of unmarried adolescents would be invited for interview so this response rate is higher than planned

The numbers and weighted proportions of key respondents (women aged 15-49 married and unmarried) belonging to different standard of living, social group/caste groups and education level are shown in Table 10. The predominant caste group interviewed were Scheduled caste and Scheduled tribe representing 67% and 64% of the sample interviewed in 2014 and 2016 respectively, followed by Other Backwards Castes represented by around one quarter of the sample at both time points. Over 60% of women were from the low standard of living category, with the proportion in 2014 slightly higher than 2016, and similarly the proportion of women in the high standard of living category slightly higher in 2016 than 2014, possibly representing small secular changes. The prevalence of women with less than 5, or 5-9 years education completed were the same in 2014 and 2016, although 40-46% had received no formal education.

Table 10 Background characteristics of women 15-49 years of age in 2014 (baseline) and 2016 (early endline) - Standard of Living, social group, and education level of HH head

Disaggregation	Sub-group	2014				2016			
		%	LCU	UCI	N	%	LCU	UCI	N
Social group/caste	General, other	11.2	9.7	12.9	30,153	9.6	8.3	11	30,147
	OBC	22.1	20.3	24.1		26.2	24.3	28.2	
	SC	23.1	21.8	24.4		25	23.5	26.6	
	ST	43.6	41.4	45.8		39.2	37.2	41.3	
Standard of living index	High	1.4	1.2	1.6	30,153	5.7	4.8	6.7	30,147
	Medium	29.4	28.4	30.4		32	30.7	33.3	
	Low	69.2	68.1	70.3		62.3	60.4	64.3	
Education level	10 or more years completed	15.9	14.6	17.2	30,144	20.3	18.6	22.1	30,147
	5-9 years completed	29.7	28.7	30.6		30.7	29.6	31.9	
	< 5 years completed	8.3	7.9	8.8		8.4	7.8	9.1	
	No education	46.1	44.3	47.9		40.6	38.6	42.7	

4.1.2 Frontline Worker Survey sample sizes

Front Line Workers (FLWs) were also surveyed under both the 2014 and 2016 household surveys. FLWs include ASHAs, AWWs and Auxiliary Nurse midwives (ANMs).

Table 11 shows the number of different types of FLWs surveyed across 37 blocks in the three PLA Wave-I districts (Balangir, Kandhamal and Rayagada). A total of 753 FLWs were interviewed in 2016 compared to the 662 interviewed in 2014.

Table 11: Type of FLW's interviewed in three Wave I districts

District	2014			
	ASHA	AWW	ANM	Total
Balangir	78	106	52	236
Rayagada	79	86	32	197
Kandhamal	88	118	23	229
Total (3 districts)	245	310	107	662
District	2016			
	ASHA	AWW	ANM	Total
Balangir	132	148	36	316
Rayagada	114	138	22	274
Kandhamal	50	104	9	163
Total (3 districts)	296	390	67	753

4.2 Qualitative research

Qualitative research was carried out twice during the programme in Wave I districts. The first round of qualitative data collection occurred in the early implementation stages of the programme (known as Grounding Study) and the second round occurred in the final stages of the implementation (referred to as qualitative endline).

The qualitative studies were undertaken to build on the coverage and equity data collected through MIS, and the activities, best practices and learning captured through Shakti Varta process monitoring and documentation. This was particularly important to test the validity of the pathway of change underpinning Shakti Varta.

4.2.1 Objectives and focus of qualitative research

The focus of the qualitative assessment of Shakti Varta was to understand the content, coverage and quality of Shakti Varta implementation.

This assessment had two main objectives:

- a) To explain outcomes attained through PLA immediately post-intervention, for example, to understand how and why these outcomes were achieved.
- b) To inform and support the scaling-up of PLA through government structures, pending their success

This assessment broadly covered three distinct dimensions of the Shakti Varta evaluation:

- a) The quality of the implementation (e.g. efficiency of fund flow, bottlenecks during set up) and implementation challenges
- b) An in-depth exploration of the mechanisms behind PLA effectiveness and how it worked, with a special focus on diffusion of PLA messages through social networks, but also exploring whether PLA was working synergistically with other interventions
- c) Scalability of Shakti Varta through government structures.

4.2.2 Research questions

The research questions covered the following areas:

- Governance and institutionalisation
- Equity and extent of Participation
- Diffusion of PLA Messages and enabling behaviour change
- Effect of PLA (including disaggregation by those who did and did not participate in PLA meetings)
- Synergy with other programmes
- Scalability

For more details about the research questions, see Annex 2.

4.2.3 Design of tools

Data was collected using a range of established qualitative techniques such as in-depth interviews (IDIs) and focus group discussions (FGDs) with study participants. FGD and IDI semi-structured interview guides were developed by TMST keeping in view the key research questions. The tools were field tested prior to data collection. All tools were translated in Odia language for the convenience of the interviewers and FGD facilitators.

4.2.4 Sampling and data collection

The Grounding Study and endline qualitative assessment was carried out in the three Wave I districts (Bolangir, Kandhamal and Rayagada) where Shakti Varta was being implemented using the same sampling and data collection approach.

At the district level DSWOs, SHG Federation leaders, District Programme Officers, SHG PLA Coordinators, TMST finance and operations consultants and NGO District Programme Officers were interviewed.

A total of six Blocks were included in the sample, two from each of the three districts. At the Block level, NGO Block Coordinators, ICDS Block Coordinators, SHG Federation Block Coordinators, and the CDPO of each of the Blocks were interviewed.

In each of the six Blocks, two Gram Panchayats (GPs) were included in the sample. A total of 12 Shakti Varta points, from 12 villages, one from each GP, were selected for inclusion. The details of the inclusion and exclusion criteria at each level are shown in Figures 8 and Figure 9. The number of study participants covered in the grounding and endline qualitative study are shown in Table 12.

Figure 7: Inclusion and exclusion criteria for the Shakti Varta points included in the qualitative sample

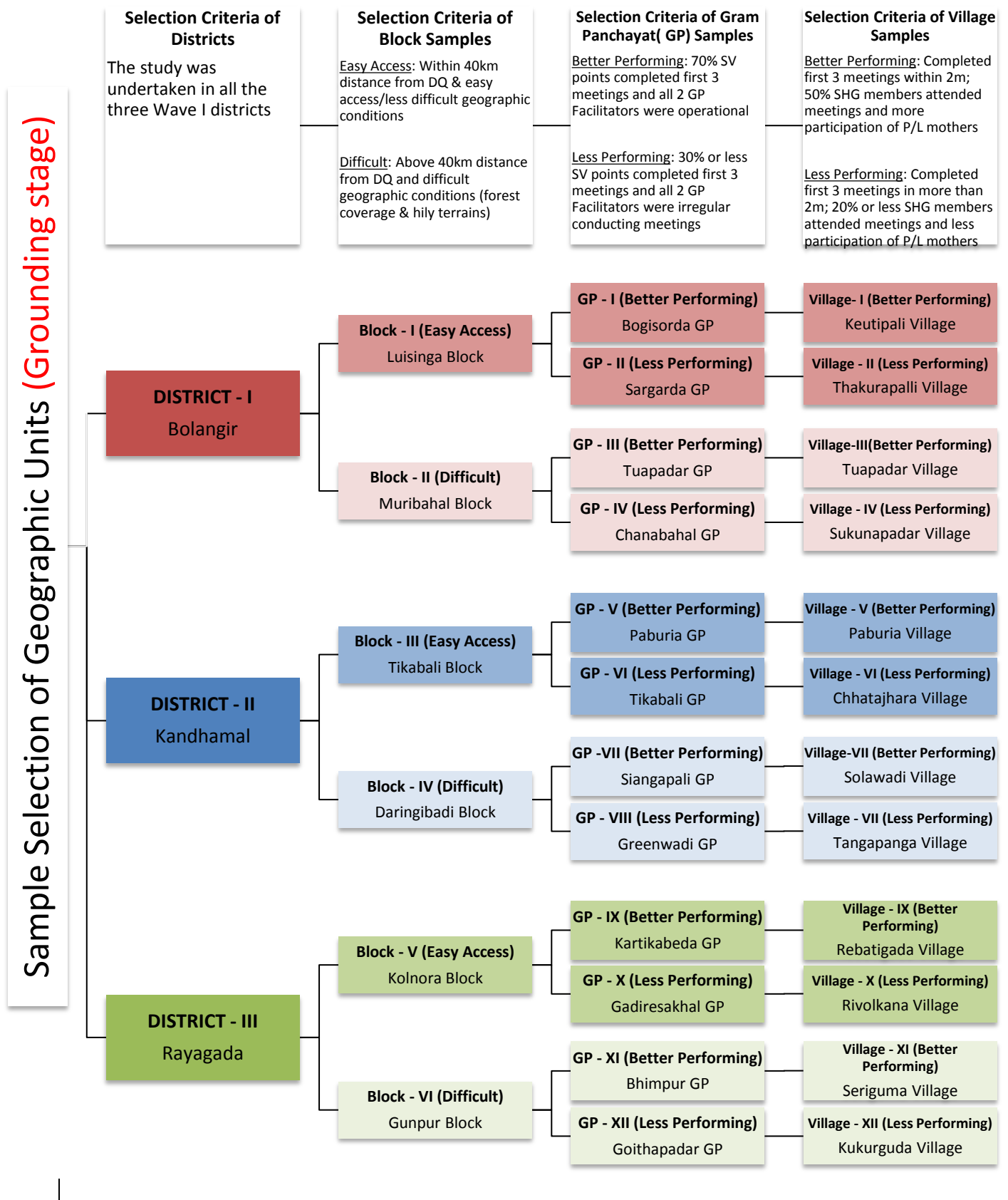
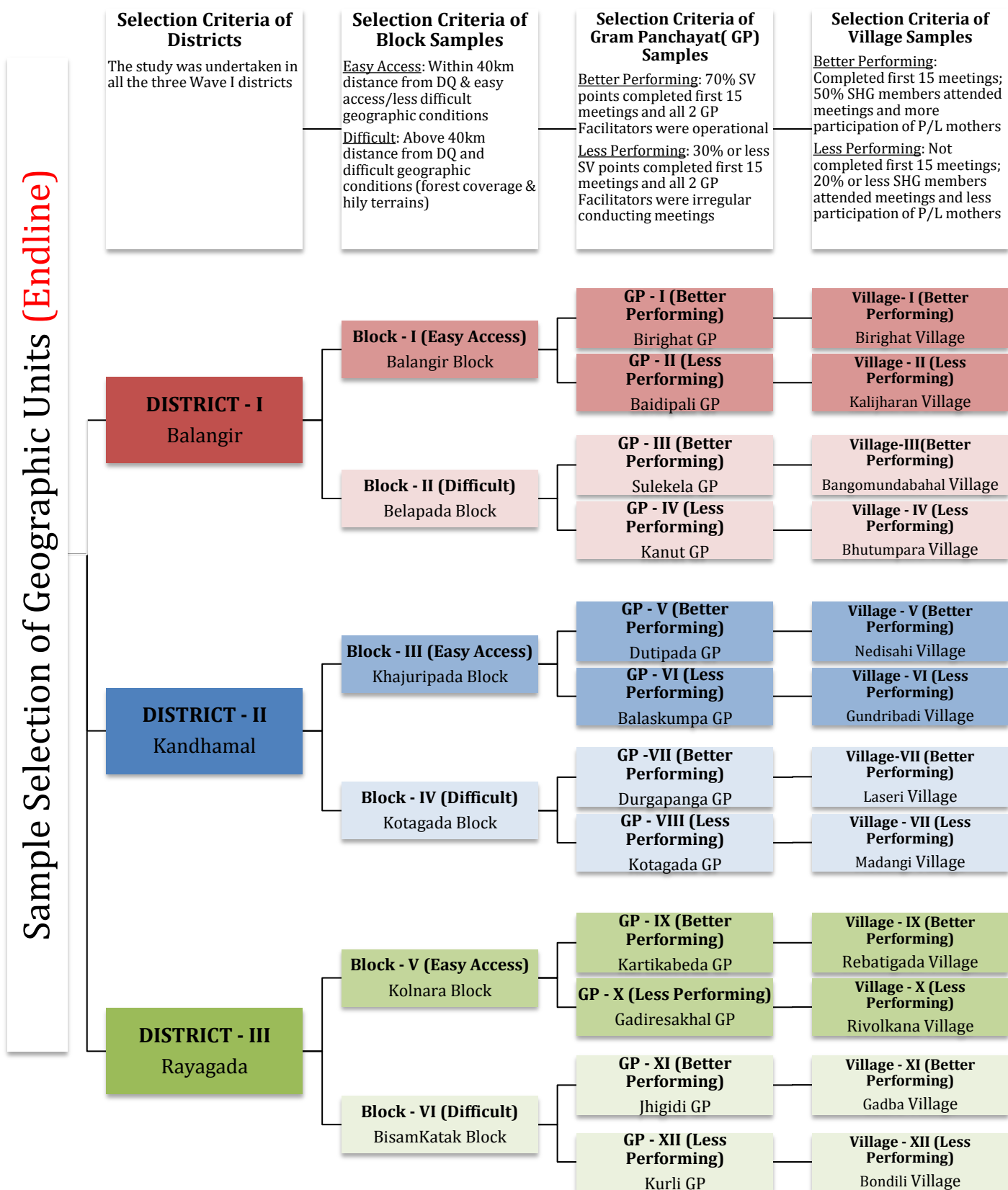


Figure 8: Inclusion and exclusion criteria for the Shakti Varta points included in the qualitative sample



Participants were selected from each Shakti Varta point to contribute to focus group discussions and FLWs were selected for in-depth interviews. Eight to ten Shakti Varta participants were identified in each of the 12 selected Shakti Varta points to participate in the FGDs. With the help of the village AWW, ASHA and GP Facilitator, the pregnant women, breastfeeding mothers, mothers-in-law and adolescent girls, who had attended the Shakti Varta meetings, were included in the FGDs. In total, 117 and 122 Shakti Varta participants participated in 12 FGDs in the grounding and endline study respectively.

In-depth interviews with the AWW or ASHA from the 12 selected Shakti Varta points were carried out separately. In the grounding study, a total of 7 AWWs and 5 ASHAs were interviewed. In the endline qualitative study, a total of 18 FLWs (seven AWWs and 11 ASHAs) were interviewed in the 12 Shakti Varta points. In 7 out of 12 Shakti Varta points, both AWW and ASHA were interviewed. In 4 Shakti Varta points only the ASHA was interviewed. In one village (Rivolkana in Kandhamal district), both ASHA and AWW were absent and could not be interviewed.

In addition, one FGD in each Block was carried out with eight to ten GP Facilitators. The GP Facilitators of Shakti Varta points located in different parts of the Block were included in the FGD. In total, 6 FGDs were carried out with a total of 45 Shakti Varta GP Facilitators in the grounding study and 54 Shakti Varta GP Facilitators in the endline study.

Table 12: Number of FGDs and IDIs conducted in the Grounding and Endline qualitative studies

Level	Study Participants	FGDs/IDIs	Grounding Study		Endline Study	
			No. of Interviews/Discussions	Total No. of Participants	No. of Interviews/Discussions	Total No. of Participants
Community	Shakti Varta participants	FGD	12	117	12	122
	Shakti Varta GP Facilitators	FGD	6	45	6	54
	Frontline Workers (AWW)	IDI	7	7	7	7
	Frontline Workers (ASHA)	IDI	5	5	11	11
Block	ICDS Block Coordinator	IDI	5	5	5	5
	NGO Block Coordinator	IDI	6	6	6	6
	SHG Federation Block Coordinator	IDI	6	6	6	6
	Block Finance Coordinator	IDI	6	6	6	6
	CDPO	IDI	6	6	6	6
District	DSWO	IDI	3	3	3	3
	District-level SHG Federation leader	IDI	3	3	3	3
	TMST District Program Officer	IDI	2	2	5	5
	TMST SHG-PLA coordinator	IDI	3	3	3	3
	TMST finance and operations consultant	IDI	2	2	2	2
	NGO District Program Officer	IDI	3	3	3	3

Selection of participants (e.g. pregnant women, lactating mothers, adolescent girls, etc.) for the FGDs with SV participants at the community level was made from the MIS data maintained by

the GP Facilitators. After selection, participants were contacted at their homes and were asked to participate in the FGDs.

Written informed consent was obtained prior to participation. For illiterate individuals, the informed consent form was translated in Odia language, and read out. The purpose, objectives, risks, benefits and confidentiality of the information collected in the study were clearly explained to the participants prior to taking informed consent. Prior information and appointment was taken from each study participant for conducting the IDIs with the stakeholders at the Block and District levels.

FGDs were conducted in a closed room e.g. in school, AWC, etc. The questions were asked as per the sequence in the FGD/IDI guides. The interviews and discussions were held in Odia language, and were recorded on a portable digital recorder.

4.2.5 Data Handling and Analysis

Data collected through FGDs and IDIs were handled in a manner that complied within ethical standards of confidentiality. The data was stored securely in accordance with international data protection practices.

The IDIs and FGDs recordings were downloaded to password-protected laptops on a daily basis after returning from the field. After downloading, the recorded files were renamed using an anonymised coding system developed in an encrypted Excel sheet.

The recorded files were directly transcribed and translated from Odia to English. Quality of the transcriptions was assured by matching the audio recordings with the transcriptions by the data collection agency as well as TMST.

After the transcriptions were completed, all the transcription data files were given new names and codes to ensure data and informant confidentiality.

The above process was followed for all the interviews/discussions. The data from the FGDs and IDIs conducted with Shakti Varta participants, GP Facilitators, FLWs and other stakeholders were compiled and thematically analysed. The analysis involved the use of a descriptive coding scheme.

4.3 Shakti Varta MIS

Shakti Varta's Management Information System (MIS) tracked progress of implementation of PLA village meetings, participation in meetings, and changes reported. Information captured included the level of attendance of community members at meetings, the demographic profile of those attendees, and the attendance of FLWs.

During the PLA meetings, data on place, date, and attending participants were collected and compiled for management support and decision-making. A web-based MIS platform was used to compile and store this summary data and periodic MIS reports were generated

and used in the process of progress monitoring. The Shakti Varta MIS did not track individual households or participants. Monthly payment of GP Facilitators was contingent on data being entered into the MIS for the Shakti Varta meetings they facilitated; payment was made directly into their bank accounts.

Key information that the MIS captured included:

- Progress of meetings by District/Blocks/GPs
- Participation by pregnant women, mothers of children below five years, adolescent girls, older women and men
- Participation disaggregated by caste/ethnic group including Scheduled Tribes (STs), Scheduled Castes (SCs), and Other Backward Classes (OBCs)
- Coverage of villages and outlying hamlets
- Participation of Frontline Workers (FLWs)
- Reported changes introduced in the community after PLA meetings, including health practices, community initiatives, and social mobilisation
- Data on the number of toilets constructed in Shakti Varta villages
- Details of training and review meetings
- Personal and bank details of each GP Facilitator

4.3.1 Village Register

In the first instance, all MIS data was collected on village registers by GP Facilitators. A pre-printed village register was developed and distributed to GP Facilitators during their initial training. The GP Facilitator completed the village register for every Shakti Varta meeting. Training for GP Facilitators on how to complete the village register was integrated into their regular training. Block Coordinators provided follow-up support during their monthly review meetings with GP Facilitators to help ensure timely submission of village registers and data accuracy.

4.3.2 Web-based and offline MIS

Once the village register data was collected, the Block Finance Coordinator entered this into the web-based MIS. In blocks without continuous internet connectivity, a block-specific offline software programme was installed in the computer system of the ICDS office. This software programme consisted of a huge backend database of village and SHG codes, bank details and Shakti Varta Facilitator details for each block, information that was critical to the running of the programme and maintaining the MIS.

The offline MIS was programmed in such a way that after data entry from the village registers, the data was imported and emailed, once internet connection was available, to the STA who then transferred it to the online MIS. Once the offline data was uploaded then full district-wide and state-level reports could be generated. At the block level, certain reports mutually agreed by TMST and the STA were generated automatically by the software for the benefit of the block level implementation team. The offline MIS also generated the status of Shakti Varta GP

Facilitator payment details to enable block federations to oversee payments and process the fees for meetings conducted.

4.3.3 MIS challenges and limitations

Delays in data entry at block level was a major challenge to maintaining the MIS. These were primarily due to poor completion of village registers by GP Facilitators, Block Coordinators not receiving village registers on time, and backlog of data entry by Block Finance Coordinators. In approximately 10-12 blocks out of the 37 in the three Wave I districts, extra human resources and/or additional travel budget was provided to assist Block Coordinators to collect the MIS formats and speed up data entry. Backlog in data entry continued to be an issue to the end of the PLA cycle, and it is likely that the level of completion of meetings is in fact higher than the figures presented through the MIS and reported in this document.

4.4 Process monitoring and documentation

To contribute to programme management and learning, the STA collected a significant quantity of data on the implementation process and synergies being forged at the community level. Knowledge management experts along with state technical resource persons and field based Quality Managers captured and documented best practices, success stories, lessons learned and key processes and strategic decisions taken by the programme. This knowledge was presented and disseminated to a wide group of stakeholders for information, advocacy and replication.

The three data sources drawn on by this evaluation are:

- Stories of Most Significant Change - “Shakti Varta Heralding Change”
- Process Document 1: “Shakti Varta Energises Communities to Drive Change in Odisha”
- Process Document 2: “Shakti Varta Delivering Quality at Scale”

Stories of Most Significant Change: “Shakti Varta Heralding Change” presents the changes being stimulated by Shakti Varta through voices of community members, local leaders, GP Facilitators, frontline health and nutrition workers, district and block level officials, local NGOs and members of the project team. It includes nine Stories of Change that trace different dimensions of Shakti Varta providing insights into what contributed to bringing about change. The stories build evidence of how community capacity and human potential has been nurtured and leveraged for better HNWASH outcomes, and how women have been empowered and community structures strengthened.

Process Document 1 and 2: Process Document 1, “Shakti Varta Energises Communities to Drive Change in Odisha” describes and analyses the design, planning and implementation processes followed in the initial phase of the programme in Wave I districts. The document describes the systems and structures created to support implementation and the challenges being faced. The Process Document 2, “Shakti Varta Delivering Quality at Scale”, describes the challenges and implementation learning that has taken place in Wave I, and how this contributed to scaling up to Wave II. It shares challenges encountered by the programme, how the supporting systems have been adapted and strengthened, and outlines the way forward for sustaining Shakti Varta.

5 EVALUATION FINDINGS ON SHAKTI VARTA IMPLEMENTATION: SCOPE, QUALITY AND STRENGTHENING GOVERNMENT CAPACITY AND SHG FEDERATIONS

5.1 Timeline

The Shakti Varta implementation was 20 months in Bolangir and Rayagada and 18 months in Kandhamal. This period is considerably less than the three years of implementation recommended by WHO for PLA interventions through women's groups and needs to be borne in mind while considering the evaluation results.

Originally it was planned that Shakti Varta meetings were to be held every two weeks. Delays in fund disbursement from the state level down to district delayed progress by delaying training and subsequent Shakti Varta meetings. To catch up on lost time and to complete the 20 meeting cycle in Wave I before the end of DFID financial and technical assistance the frequency of meetings increased as the cycle progressed. Meetings in the first mini-cycle on maternal and newborn health were held almost once in three weeks, but in the second mini-cycle on nutrition and WASH the frequency increased, with some places conducting meetings within 7-10 days of each other.

The rushed pace of meetings had implications for participation and quality. Mobilising participants for Shakti Varta meetings became more challenging as their increased frequency placed greater time demands on village women with heavy workloads. Process Document 2 reports that GP Facilitators and frontline workers found that the volume of HNWASH messages squeezed into a short period of time became overwhelming for the community to assimilate, absorb and apply to their lives. The information overload was felt to result in patchy understanding of key messages and affected their conversion into appropriate behaviour change.

5.2 Coverage

International and Indian evidence from randomised controlled trials has shown effectiveness of PLA with women's groups in areas with high maternal and neonatal mortality and poor access to services. However, given the objective to implement a PLA intervention at scale using government systems, Shakti Varta was designed to cover all areas within the 15 HBDs including accessible blocks with better access to information and services, and not just remote hard to reach blocks that tend to have higher mortality rates.

All three Wave I districts include remote and hilly areas and Left Wing Affected (LWE) areas which increase the difficulties of delivering community interventions. The Grounding Study found that terrain, scattered populations and Maoist affected areas hindered implementation from the point of identifying Shakti Varta points, the capacity of GP Facilitators to reach and mobilise communities, and retaining the interest and motivation of GP Facilitators.

The ratio of 1 GP Facilitator for 500 population follows the guidance suggested by Prost et al (2013). The qualitative Grounding Study undertaken after Meeting 3 was completed, reported that this ratio was too high for people living in hilly areas and low lying pockets who would face difficulty in attending meetings in distant Shakti Varta points. The programme therefore reduced the ratio to 1:300 in remote areas with scattered populations. Similarly, the norm of two GP Facilitators per GP was also revised after Phase III training in Wave I (covering Meeting 8 -11) so that the number of GP Facilitators was based on population size and not GP boundaries and thus assisted in increasing the number of facilitators in remote areas.

5.3 Mobilising target groups and the community to attend SV meetings

According to respondents in the endline qualitative study, meeting sites were initially chosen by the GP Facilitators and AWWs and ASHAs and then once meetings had began participants' chose the sites. Out of 12 sites, three were at AWCs, and the rest were conducted in school buildings, Sarapanch's house, village-square, Panchayat building, under a tree and community hall. Open spaces were not ideal due to weather and privacy.

As it is an open place, so everybody can't gather there. So we don't like that place. There we cannot share our problems to all but as this is a closed place, we can share all the problems and can listen everything carefully.

Grounding Study: Shakti Varta participants, Solawadi village, Daringbadi Block in Kandhamal district

In the Grounding Study, Shakti Varta participants reported that the meeting time was decided jointly though their preference was for the afternoon or evening. However, this was not always possible for the GP Facilitator especially if she had a long distance or difficult journey

to travel. In some remote areas, GP Facilitators reported that they needed to stay overnight with village people due to the distance and dangers of travelling through the forest in the evening.

Findings from the Grounding Study and qualitative endline show that GP Facilitators considered the support extended by FLWs to introduce the facilitators to the community, mobilise the community and organise meetings as the most important enabling factor to the delivery of meetings. Despite forward planning of meetings, just before a meeting, the GP Facilitator along with ASHA and AWW had to move door-to-door to round people up. Some facilitators mentioned that since they had more than one meeting in a day to facilitate, they did not find adequate time for mobilizing the community just before the start of the meetings.

Yes, initially mothers were not coming to the meetings. They used to say that it might be the same as ASHA and hence there was no requirement for it. Some of the villages are very far apart. So our first aim was to unite them. In the meetings, we call pregnant women, mothers of newly born, adolescent girls in general. But we give more priority to pregnant women more. The women generally do not allow the adolescent girls to attend these meetings as they think that it's not the suitable time for them. But it's the perfect time for them. So we show them that it's even provided in the formats and manuals about the girls.

Grounding Study: GP facilitators, Daringbadi block, Kandhamal district

In some areas there was an expectation that participants would be given money for attending the meetings (Gunupur Block, Rayagada District) and though GP Facilitators persuaded people to attend to gain knowledge instead of money, this may have affected participation in some places. Gaining the support of family gatekeepers

People were reluctant to involve in the meeting because they argued that why should they attend the meeting will they bring water or anything else to the village. But we argued that that if we could come from so far to conduct the meeting then why will they not attend it.

Grounding Study: GP facilitators, Gunupur block, Raygada district

such as mothers-in-law and husbands was important to allow some target women to attend meetings. Convincing people to

attend the meetings required considerable persuasion, and the support of FLWs was critical.

5.3.1 GP Facilitator capacity and retention

The capability of GP Facilitators varied and in remote areas it was particularly difficult to find candidates with the minimum criteria of eight years of education. More intense support required of less educated GP Facilitators in remote areas placed additional pressure on the programme. While handholding through mentors and seniors was provided on a case-by-case basis, a more structured approach would have been more beneficial and is recommended for the future. For example, training materials, session plans and trainers' manuals need to be revised to reflect the enhanced training required of less educated facilitators and more time allocated for field support to them.

The low compensation of Rs. 100 per meeting received by GP Facilitators with no additional travel/time compensation if she went to far-flung areas or distant hamlets affected motivation and discouraged coverage of the most difficult to reach communities. Delays in payment of facilitators as discussed later also impacted motivation. Interviews with Block Coordinators undertaken during the endline qualitative study found that they considered low remuneration and the long and demanding travel expected of GP Facilitators was the main reason for drop out. Process Document 2 estimates that there was a dropout rate of 25% of GP Facilitators. The tight budget allocation for training and the lack of scope to hold mop up training for new recruits was problematic. To address the situation 'back up or reserve' GP Facilitators started to be identified by the GP Facilitator, Block Coordinator and SHG Federation and once needed, Block Coordinators trained them at review meetings; while this was a pragmatic response, the quality of facilitation of back up facilitators is likely to be reduced.

5.3.2 PLA cycle, meeting content and methods

The evidence base around the effect of PLA on maternal and neonatal mortality is strong and while Shakti Varta was designed with a focus on maternal and newborn health, it was extended to incorporate nutrition and WASH messages too. The division of a twenty meeting PLA cycle into two mini-cycles is innovative but carried the risk of making the PLA process too shallow for the breadth of behaviour change being promoted. Process Document 2 recorded how there was demand from the community for a second meeting on challenging topics such as maternal health. The argument was for the first meeting to build the context and equip the group with basic information and the subsequent meeting to clarify doubts, provide solutions, referrals and linkages. However, the broad scope of themes covered by Shakti Varta's PLA cycle left no space for additional meetings to clarify material. The frequency of meetings in the second mini-cycle as discussed above also impacted the quality of the community mobilisation process and the perceived capacity of participants to absorb and process the volume of information.

Experience of implementing meetings in Wave I led to adaptations to content and material:

- Hand washing: Following proposals from facilitators, hand washing demonstration was introduced at the end of every meeting. This became a regular feature, with a mother and child from the audience stepping forward to show the group how to wash hands, strengthening participation and driving home the message on washing hands.
- Depending on ground realities some training sessions were shifted. For instance the sessions that had details on keeping the newborn warm and on baby wrapping were moved to training sessions that were conducted in the winter months to make them more relevant.
- Recap and reflection sessions at the end of Shakti Varta meetings were introduced after Phase III training (Meetings 8-11) to allow time for participants to share experiences and apprehensions. Facilitators reported how these sessions brought energy to the group, as participants got to know each other and connect.

The qualitative endline found widespread approval and support from Shakti Varta participants, GP Facilitators and FLWs for the interactive and participatory methods adopted by the programme. The games and picture cards were particularly felt to help village people in visualising problems and absorbing HNWASH messages and were felt to be more effective than plain discussion in the meetings. Process Document 2 also noted the effectiveness of the picture cards in communicating messages during village meetings and the high demand for them from ASHAs and AWWs to support their communication of health and nutrition messages.

5.3.3 Training

Training rural women with limited education requires a slow pace of training with regular hand-holding. GP Facilitators were trained in intervals during the PLA process so that new information could be shared, skills developed over time, and training sessions used to discuss and solve issues that emerged from the community. The phased training aimed to give sufficient time to GP Facilitators, many of whom had not completed their matriculate education, to assimilate messages and methods of delivery.

The cascade-training model was the most efficient way in which to roll out training to close to 6,000 community agents across a large geographical area. Delays in the transfer of training funds to the districts from DWCD however hindered the pace of training and impacted on the quality of training. The Grounding Study found that the long gap between the training of state and district resource persons and then the step down training to GP Facilitators impacted the recall of trainers and the quality of training in Phase I and II training.

Moreover, due to the delay in fund disbursement from DWCD down to districts, only three phases of residential training of GP Facilitators were carried out in Wave I. GP Facilitators did not receive the three-day Phase IV (Meetings 12-18) or Phase V (Meetings 19-20) residential training. Process Document 2 notes how a solution was provided by giving GP Facilitators orientation sessions to substitute for Phase IV training and by dedicating monthly review meetings to preparing them for their next meeting. This was partly funded through NGO contingency funds and partly through TMST contingency funds. While this addressed the immediate gap and enabled GP Facilitators to move ahead with planned meetings, it was not as effective as the three-day dedicated residential training would have been with inevitable impact on quality of meetings.

The Grounding Study further concluded that the number of days training for each phase given the content is tight. GP Facilitators themselves proposed that the residential training be increased from three to five days, though this was not possible due to budget constraints.

Participation of ICDS Block Coordinators in delivering training to GP Facilitators was sub-optimal. Process Document 2 found that many of them stayed just an hour or so at the training. Their reluctance was in part reported to be due to lack of clarity about their role as an assigned Block Coordinator to Shakti Varta, their heavy workload as an ICDS Block Supervisor due to vacancies at that level and there being a large geographical area to cover.

Programme implementers reported that the quality of training of GP Facilitators improved over time as Block Coordinators improved their own training skills. The participatory style of training was well-received by training participants and trainers. In the qualitative endline study, Block and district stakeholders reported high levels of participation of GP Facilitators in their training.

The trainings conducted by Department of WCD are focused on pre-school education, Take Home Ration and record maintenance. Those are not residential trainings and supervisors and AWWs are in a hurry to return home. In comparison, Shakti Varta trainings are residential, and the methodology is participatory with games and pictorial presentations. All this make the trainings interesting.

CDPO, Kajuripada block, Kandhamal

Delays in the production of training material meant that training manuals, training aids and GP Facilitator handbooks were not print ready for the Wave I residential training implemented. Sessions on MIS, knowledge management and

Shakti Varta Resource Centre (SVRC) were only introduced during Phase III training.

5.3.4 Supervision, monitoring and MIS

5.3.4.1 Shakti Varta Resource Centre (SVRC)

The SVRC was an innovative information and communication response to the challenges of large scale community level interventions. It combines traditional and modern information and communication tools to facilitate and promote capacity building, self- and cross-learning, management and monitoring with a view to improving programme quality. The SVRC provided a repository of information to support training, supervision and monitoring and try to reduce the training loss inherent in conditions of scale up. It included online training and reference materials, which were provided in hard copy to those blocks with poor internet connectivity. Moreover, SVRC provided a helpline resource for Block Coordinators and GP Facilitators enabling two-way communication between blocks, districts and the State Technical Agency. The main problem that some users faced was in accessing the online features of the SVRC given poor internet connectivity at the block level in some areas.

5.3.4.2 Supervision and monitoring

The Grounding Study highlighted the limited field supervision being undertaken by Block Coordinators. This was in part due to the lack of transport allowance for NGO Block Coordinators and limited mobility and involvement of ICDS Block Coordinators. Process Document 2 describes how programme monitoring found various types of anomalies in the conduct of Shakti Varta meetings including GP Facilitators combining meetings and filing false

claims of meetings held. To correct these gaps, Spot Checks and Back Checks of meetings by Quality Managers were introduced. Back Checks were done with prior information and Spot Checks were surprise visits. Spot checks entailed visiting the Shakti Varta point during the village meeting and personally taking stock of the formats that were being filled. These new monitoring tactics helped address the problem of irregular meetings and incorrect information being fed into the MIS.

Process Document 2 found that field supervision and monitoring was a key factor in determining implementation quality and effectiveness. It was found that GP Facilitators were more effective in blocks in which the Block Coordinator was efficient, capable, motivated and visible. These blocks were characterised with

- Less attrition of GP Facilitators
- Better participation in village meetings
- A well balanced women's group with each of the target groups represented
- Timely filling of village registers and MIS updates
- A more homogenous, congenial and well-knit SV block team
- Greater visibility of Shakti Varta through better display of flex charts, posters and distribution of materials
- Greater clarity in the nature of feedback to SHG PLA Coordinator from the block team
- Smoother mid-term corrections, if any
- Stronger partnerships with FLWs and key influencers
- Visible changes in HNWASH behaviours such as a higher rate of toilet construction

Other factors found to be associated with more effective blocks were strong district ownership and support, strong NGO partners and commitment of GP Facilitators.

Bringing people from different organisations to work closely together required specific team building efforts to build trust and strengthen communication. Friction was exacerbated by the different terms and conditions of Block Coordinators engaged by NGOs, appointed by SHG Federation and nominated by ICDS. The lack of transport allowance for NGO Block Coordinators was a particular point of tension. Team building was also required at district level where staff from the district NGO, the State Technical Agency and TMST were positioned to support implementation.

5.3.4.3 MIS

The MIS became operational in mid-2014 and was critical for managing programme implementation, identifying gaps such as in the delay between meetings held and facilitators being paid, as well as participation at meetings. Initially there were significant delays in the collection of paper based village registers from GP Facilitators and data entry into the MIS. The Grounding Study found that GP Facilitators had problems in correctly filling-in the MIS format and often had to correct the information for submission in the following month. The low education levels of the GP Facilitators hampered data collection, and training on the MIS had to be enhanced in Block Coordinator and GP Facilitator Phase III training. The time lapse between meetings held and data being correctly entered into the MIS reduced the capacity of the MIS to support real time monitoring.

Block Finance Coordinators (BFC) played a crucial role in data entry and uploading data for the offline MIS and related processing of facilitator payments, maintaining ledgers and books, and setting up and maintenance of the Block Resource Centre. Recruitment of BFCs was a challenge in some places, especially in Kandhamal, as there were few commerce graduates in the district. It was found that the role of the BFC was confined mostly to data entry in the MIS, which accumulated at the end of the month when they were under pressure to complete the process on time. This led to omissions and quality gaps that tended to be rectified a month later, when they sat down once again to enter the updates in the MIS. A larger role could have been planned for BFCs so that their time during the rest of the month could have been utilised more optimally. The staggered collection of MIS reports from facilitators during the month so that data entry could be spread out would lead to a more efficient use of time.

One of the main challenges faced was the lack of a dedicated block office with computer and internet. Typically the ICDS project block office had only one computer, and limited access to this meant delays in MIS data entry. Field teams repeatedly voiced this issue in process monitoring reports. Such a facility would have increased the efficiency of the MIS and the linked payment of GP Facilitator fees, and accessing the SVRC for useful information.

5.3.5 Funding and fund flow

The Grounding Study documented the funding delays at the beginning of the programme. It found that the Nutrition Operational Plan Programme Implementation Plan was approved on May 29, 2013 but payment to the Wave I districts for GP Facilitators fees, office stationary, printing of MIS formats and monitoring and supervision for the first two quarters of the year was made after 8 months on February 02, 2014. The budget for training and review, and expenses of GP Facilitators was transferred to districts after another 5 months on August 05, 2014.

After they said that the fund was released, I started the training programme immediately. But in the review meeting, they said that the fund had not come. But I had called the people for the training. So I did the training and the fund was received after around 6 months.

DSWO, Kandhamal

Q. For how many days you have remained unpaid.
A. Currently we are facing it and it has been 5 months.
Q. How many times have you been paid till now?
A. March-April, July in 2014 and then the payment of July to December of previous year on this year January.

Block Coordinator, Tikabali block, Bolangir district

Delays in paying NGOs was also reported in the Grounding Study. As informed by the Rayagada DPO as well as the Kandhamal DSWO, Block Coordinators were not getting their salary and dues regularly from the NGOs resulting in difficulty in retaining them. As all the Block Coordinators are graduates, they leave the job as soon as they get another and when a trained person leaves, it was very difficult to find a suitable person and orient them again on the entire process. Kandhamal DPO explained that finding a suitable and motivated Block Coordinator and BFC was a major challenge for the District team.

The delays in paying NGO staff was linked to the deliverable based contract signed between TMST and the NGOs at the beginning of the programme. Internal fund constraints meant that

NGOs could not pay staff and due to delays in implementation could not submit Statements of Expenditure to TMST for deliverables. This funding bottleneck was resolved when TMST and the local NGOs switched to a mixed deliverable and expenses contract.

Delays in paying GP Facilitators were also problematic in the early stages of the programme as discussed above under the MIS section. This demotivated the facilitators and slowed the pace of conducting meetings.

Delays in the release of funds from DWCD to districts also impacted on Phase IV training and implementation of related meetings. Funds were requested in June 2015 but released in January 2016. Orientation sessions with GP Facilitators were held so that meetings could go ahead to meet the DFID exit date but the quality of facilitation was heavily impacted.

The printing budget for MIS forms which was allocated to districts was only ever tendered in Bolangir out of all 15 HBDs due to the time consuming and demanding nature of tendering for government officers. To fill the gap, TMST arranged MIS forms for each district but without TMST these forms will need to be centrally procured and distributed.

In the qualitative endline study, the Block Coordinators of Bolangir and Kandhamal pointed out that even when funds had been disbursed to them, the budget heads had been set with underfunding of GP Facilitator fees to hold meetings. This led to substantial gaps between successive meetings. The budget heads were decided at the state level.

5.4 Strengthening government capacity and SHG Federations

5.4.1 Strengthening ICDS

Process Document 2 reports that ICDS staffs recognize that Shakti Varta benefits the ICDS programme by extending the reach of communication and community mobilization processes, and strengthening block level planning and monitoring. At the block level, the BFC supported ICDS functionaries in preparing AWW bills and sector meeting related documentation, while the NGO Block Coordinator updated the CDPO on area-level issues collected during field supervision that were later discussed in sector meetings.

The presence of additional community and block level human resources in Left Wing Effectuated areas was particularly valued.

“My block is hampered by Naxal activities. There was only so much I could do with AWW and ASHA in my block. Having an energised new team of BCs and GPFs and having myself received fresh training, made us all much more impactful.” *CDPO, Chandrapur block, Rayagada*

“Initially we were intimidated with all the paper work, formats and forms to be filled but gradually we realised how important it was to keep records and document meetings. They always came handy in reviews and planning for the next stage of the programme.” *Dhanurjaya Raju, BC ICDS, Rayagada*

“ASHAs and AWW have their own targets and they focus more on providing targeted services. There is less time left to create demand among the community to access the services that are facilitated by them. Now they have got a productive, helpful person whose focus is more on community mobilisation, awareness building and creating demand. People are receptive to the health information dissemination sessions because of the participatory methodology of training. There are significant changes noticed in the behaviours in the community. This way, the common objectives of the state to improve health, nutrition and lives of people are being fulfilled to a great extent.” *Subarnamala Nayak, CDPO, Chandrapur block, Rayagada*

“ICDS is getting a lot of support from Shakti Varta. Having trained manpower such as Block Coordinators and Block Finance Coordinators at the block level, there is sharing of responsibility and an increase in coverage. The most important thing is at community level, there are additional human resources to strengthen the programme.” *Bimalini Pradhan, CDPO in Muniguda block of Rayagada district*

Excerpts from Stories of Most Significant Change

5.4.2 Contribution and convergence of FLWs

Overwhelmingly the relationship between AWW, ASHA and GP Facilitator was collaborative and complementary. Examples are plenty where an AWW or ASHA would encourage specific women to attend meetings knowing that they were pregnant or would benefit from the topic of discussion. Process Document 2 includes the example of an ANM who knew that one of the women in the community was struggling to build a household toilet and was not clear on how to avail the government subsidy and what steps to take to complete the task. She discussed this with the GP Facilitator and made sure to bring the woman to SV Meeting 4 where the subject of ODF and toilet construction was taken up. Through their involvement in Shakti Varta, FLWs felt they were progressing community health and nutrition, enabling their own targets to be achieved, and increasing attendance at the AWC and VHND.

“Care during pregnancy, birth, importance of immunisation and IFA, benefit of institutional delivery, role of exclusive and correct breastfeeding, maintaining hygiene and hand washing practices are widely discussed in SV meetings at the village level. Each of these behaviours complements our work at ICDS too.”

“Even though we are not given financial incentive for our role in SV, we feel as if we are a part of the programme. We attend meetings not as invitees but as anchors, guides and joint Facilitators. It is not important who out of us (GPF, ASHA, ANM, AWW) conveys a message. What is important is that all key messages get conveyed in the right manner and to the right target group.” AWW Rayagada

“Being a Left Wing Extremism area that is impacted by a longstanding Naxal presence has made it difficult for people to access services. Roads are broken, healthcare delivery system is patchy, there are very few jobs so poverty levels are high and being tribal communities, unhealthy practices are still rampant. Our work becomes very challenging and even though our village volunteers and women SHGs are active, a lot needs to be done. Having an energised new team of BCs and GPFs has enthused us with a new energy. We feel strengthened and we also get a chance to brush our knowledge and skills learning from the tools and PLA methodology of SV.” ASHA, Rayagada

5.4.3 Strengthening Block SHG Federations and SHGs

The implementation of Shakti Varta through the institutional structures of Mission Shakti benefitted Block level SHG Federations (BLFs) in several ways. Shakti Varta was successful in reviving many dormant BLFs by involving their members in Shakti Varta implementation. It also expanded the capacities and agendas of the BLFs, orienting and training them on new subjects including financial management which raised their credibility in their interactions with local communities.

“When Shakti Varta began, SHGs were very active but Federations were not. Previously only 3-4 Gram Panchayat Federation (GPF) members used to attend BLF meetings. But now, because GP Facilitators are part of SHGs and GPF, communication network has improved, leading also to better attendance in meetings. The trend now is that as many as 15-16 GP Facilitators attend the BLF meetings.” *Vishnu Priya Kanhar, BLF President, Phiringia, Kandhamal district*

“On the 18th of every month, a discussion is organised at the BLF, specifically on Shakti Varta. All members are updated about progress and issues. They discuss the training they have received, how the facilitators are performing, and how to improve the performance. Besides, BLF members are increasingly taking up responsibility to engage with the SHGs in their respective villages, following up and tracking changes in behaviours while bringing about a positive change in their respective communities.” *Damayanti Behera, BLF President*

The endline qualitative study collected reports from Shakti Varta participants suggesting that SHGs had become more active as a result of Shakti Varta, including increased involvement in village development activities and engagement with FLWs.

Mission Shakti’s very participation in Shakti Varta extended its scope of work to include social empowerment and the improvement of women’s HNWASH, and was felt to have helped to revive the Mission.

6 EVALUATION RESULTS FOR PARTICIPATION IN SHAKTI VARTA MEETINGS, THE EFFECT ON HNWASH OUTCOMES, COMMUNITY ACTION AND WOMEN EMPOWERMENT

6.1 Participation in Shakti Varta meetings

6.1.1 Exposure to Shakti Varta meetings from 2016 survey

In the 2016 survey, key Shakti Varta target groups (adolescent girls 10-19 years [including married adolescents], pregnant women and women with a child under five years of age) were asked about their exposure to Shakti Varta meetings.

Knowledge of and attendance at Shakti Varta meetings

Around 16% of adolescents 10-19 years of age, 35% of pregnant women and 43% of women with a child under five years of age had either heard of or attended Shakti Varta meetings (Table 13). Out of the three respondent groups, attendance was lowest by adolescent and 6% (95% CI 5.0-7.2) reported to have attended meetings. Around 65% of pregnant women, 57% of women with a child under five and 84% of adolescents reported to have never heard of or attended Shakti Varta.

Table 13: Key respondents who have heard of or attended Shakti Varta meetings in their locality (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval).

Indicator	Key respondent group	%	LCI	UCI	N
% of women 15-49 who have ever <i>heard of</i> Shakti Varti meetings in their locality	Adolescents 10-19	10.4	9.3	11.4	9,677
	Pregnant women	15	13.5	16.5	3,305
	Women with a child under 5 years old	22.3	20.5	24.3	21,875
% of women 15-49 who have ever <i>attended</i> Shakti Varti meetings in their locality	Adolescents 10-19	6	5	7.2	9,677
	Pregnant women	20.1	18.1	22.3	3,305
	Women with a child under 5 years old	20.6	18.9	22.5	21,875

Respondents who had never attended Shakti Varta meetings but had heard of them were asked from where, or from whom they heard about the meetings (Table 14). A little over half of pregnant women and women with children under five, and two thirds of adolescents reported neighbours as the most common source. AHSAs and AWWs were the next most common source of awareness.

Table 14: Most common sources of awareness about Shakti Varta for respondents who had only heard of the meetings but not attended (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval).

Indicator	Most common (top 3) sources of awareness about Shakti Varta meetings	%	LCI	UCI	N
Adolescents 10-19	Neighbour	65.3	61	69.5	1,061
	ASHA	38	33.4	42.8	
	Anganwadi Worker	20.7	17.6	24.1	
Pregnant women	Neighbour	55.4	50.8	59.9	538
	ASHA	31.9	27.7	36.4	
	Anganwadi Worker	37.8	33.1	42.7	
Women with a child under 5 years	Neighbour	51.2	48	54.4	5,054
	ASHA	31.2	28.6	33.9	
	Anganwadi Worker	39	36	42.2	

Out of those who had attended meetings, the majority reported to have attended between 1-3 meetings, with attendance declining for increased numbers of meetings (Tables 15-17). Only 3-5% of pregnant women and women with a child under five reported to have attended six or more meetings.

Table 15: Number of meetings attended by adolescent girls 10-19 years of age (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval).

Number of meetings attended by adolescent girls 10-19 years of age	%	LCI	UCI	N
0 meetings	94	92.8	95	9,677
1-3 meetings	3.7	3.2	4.2	
4-5 meetings	0.6	0.5	0.9	
6+ meetings	1.7	1.1	2.8	

Table 16: Number of meetings attended by pregnant women (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval).

Number of meetings attended by pregnant women	%	LCI	UCI	N
0 meetings	79.9	77.7	81.9	3,305
1-3 meetings	12.8	11.3	14.4	
4-5 meetings	3.9	3.2	4.8	
6+ meetings	3.4	2.6	4.5	

Table 17: Number of meetings attended by women with a child under five years of age (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval).

Number of meetings attended by women with a child under five years of age	%	LCI	UCI	N
0 meetings	79.4	77.5	81.1	21,875
1-3 meetings	12.4	11.4	13.5	
4-5 meetings	3.4	2.9	3.9	
6+ meetings	4.8	3.7	6.3	

Reported attendance and knowledge of Shakti Varta groups disaggregated by district indicated higher attendance in Bolangir and Khandhamal than Rayagada (Table 18). In Bolangir, around 41% of key respondents knew about Shakti Varta, either from diffusion of information or actual attendance, compared to 29% in Khandhamal, and 28% in Rayagada.

Table 18: Key respondents who have heard of or attended Shakti Varta meetings in their locality, by district (Bolangir, Khandhamal and Rayagada districts)

Indicator (key respondents include adolescent girls 10-19, pregnant women and women with a child under five)	Bolangir % (95% CI)	Khandhamal % (95% CI)	Rayagada % (95% CI)
% of key respondents who have ever heard of Shakti Varta meetings in their locality	20.3 (18.3-22.4)	13.3 (11.0-15.9)	19.4 (16.7-22.3)
% of key respondents who have ever attended Shakti Varta meetings in their locality	21.4 (19.0-23.9)	16.0 (13.0-19.5)	8.6 (7.0-10.7)
N	15,550	8,355	10,952

6.1.2 Enabling factors and barriers to participation in Shakti Varta meetings as reported during qualitative research

6.1.2.1 Enabling factors

The Grounding Study and endline qualitative research found that family support especially from the woman’s husband and mother-in-law was the most important factor enabling women to attend Shakti Varta meetings. Participation of frontline workers (ASHA and AWW) was the other most frequently reported enabling factor, given the respect and importance afforded to ASHA and AWW by women in the community.

Attendance at individual meetings was reported by Shakti Varta participants and Frontline Workers to vary, with attendance increasing as the meetings progressed once family members were convinced of their value, and women felt more comfortable participating. In the endline qualitative research some Shakti Varta participants reported how family members motivated them to attend the meetings due to the positive changes in health and hygiene practices they had brought about.

Other reasons for fluctuating attendance included rain, farming season, festival season and synchronising meetings with VHNDs.

6.1.2.2 Barriers to participation

In the Grounding study, Shakti Varta participants mainly reported that only a small proportion of people in the community participated in meetings. In nine out of the 12 villages, the participants reported low attendance at Shakti Varta meetings. High participation was reported in Chatajhara village in Tikabali block (Kandhamal district), where Shakti Varta meetings were conducted on VHNDs.

The meeting should be held in evening because during daytime some women were having work at home so it is not possible for every woman to attend the meeting.

FGD with Shakti Varta participants, Chatajhara village, Tikabali Block, Kandhamal district

Engagement in livelihood-generating activities was cited as the most common barrier to participation in Shakti Varta meetings. The second most common barrier was household work, which was considered more important than attending meetings.

The mothers, who went for earning their livelihoods from the morning and came at night and the migrant mothers of these villages could not attend the meetings because if they did not go for the work, then they would have to starve.

Gundaribadi (Khajuripada Block in Kandhamal)

Unsuitable timing of the meeting was the next important barrier to participation with women stating a preference for evening meetings; timing also impeded participation by adolescent girls who were at school during the day. Women from far-flung hamlets were interested in the meetings but were not able to attend in some blocks, though this pattern varied by block. Less common barriers

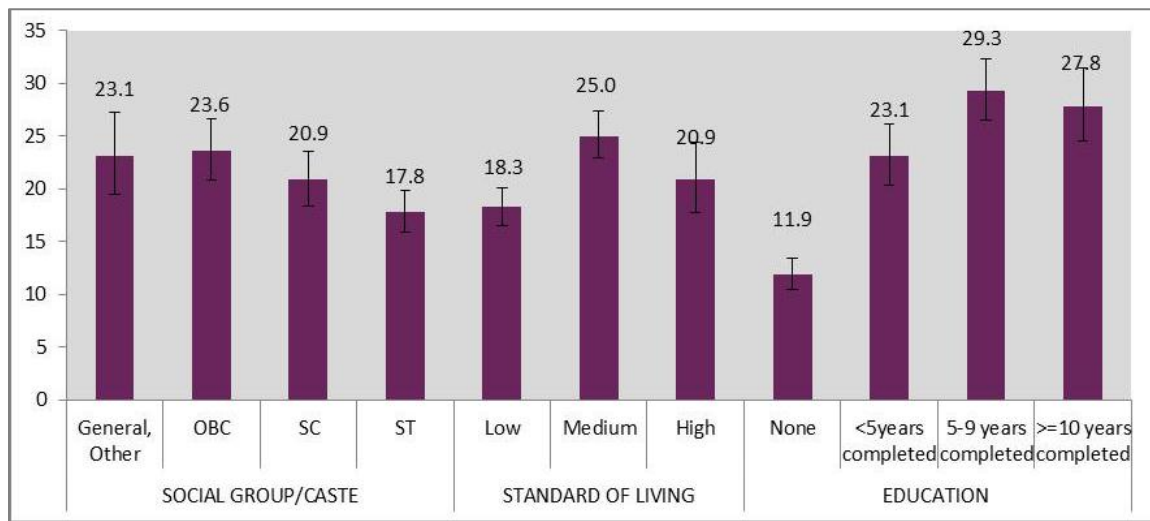
reported were: meeting conducted in open space without privacy (Solawadi village); the meeting site being far away (Rivolkona and Kukurguda villages); no prior information about the meeting (Seriguma village); problem in understanding Odia language (Seriguma village); women not allowed to attend the meetings by mothers-in-law (Rivolkona and Seriguma villages) and heavy rain (Tuapadar village).

6.1.3 Who attends Shakti Varta meetings?

6.1.3.1 Socio-demographic background of women attending Shakti Varta meetings from 2016 survey

Attendance at Shakti Varta among pregnant women and women with a child under five was disaggregated by social group, standard of living and education level. There was some indication that attendance by women from poorer backgrounds was slightly lower, although the confidence intervals mostly overlapped suggesting that these differences may not be significant (Figure 10). Women with no education appeared considerably less likely to have ever attended any Shakti Varta meetings compared to women with some education (note that adolescent girls have been excluded here due to different education categories).

Figure 9: % of pregnant women and women with a child under five who have ever attended a Shakti Varta meeting disaggregated by social group, standard of living and education level (error bars indicate 95% confidence intervals)



6.1.3.2 Attendance at Shakti Varta meetings from MIS

While the household survey asked all key respondents if they had ever attended a Shakti Varta meeting, the MIS collected data on who participated at each meeting disaggregated by Shakti Varta's target groups and caste/ethnicity. The household survey data shows the relative likelihood of key respondents from different socio-demographic groups participating in Shakti Varta meetings while the MIS data shows who actually participated.

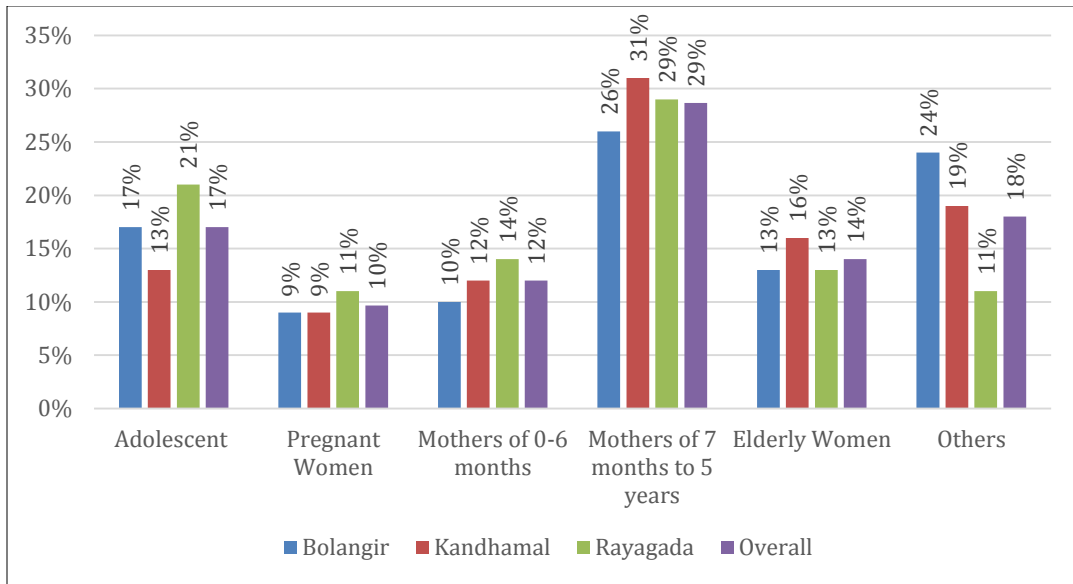
Attendance by target group

In the MIS, Shakti Varta target groups were disaggregated as follows:

- a) Mothers with children 0-6 months
- b) Mothers with children above 6 months and up to 5 years
- c) Pregnant women
- d) Adolescent girls aged up to 19 years (including married adolescents).

MIS data shows good participation of these target groups in Shakti Varta meetings. In total the target groups made up almost 67% of Shakti Varta meeting participants, ranging from 62% in Bolangir, 65% in Kandhamal and 75% in Rayagada (see Figure 8 below).

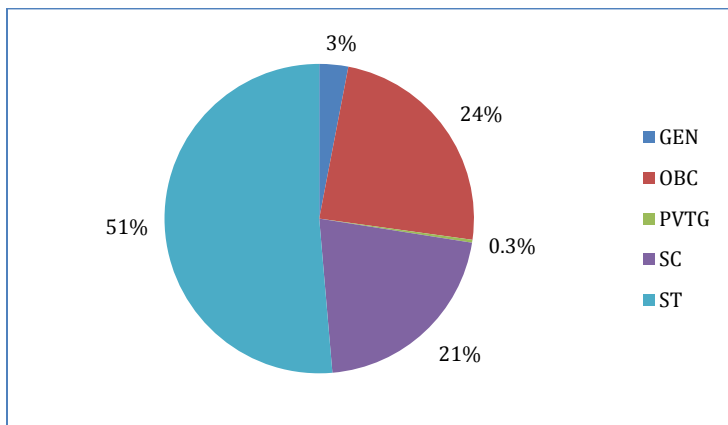
Figure 8: Women's participation in Shakti Varta meetings by target group



Attendance by caste/ethnicity

The MIS shows that at the aggregate level, Scheduled Tribe (51%) and Scheduled Caste (21%) women combined made up over 72% of Shakti Varta meeting participants (Figure 11).

Figure 10: Social background of SV meeting participants from MIS

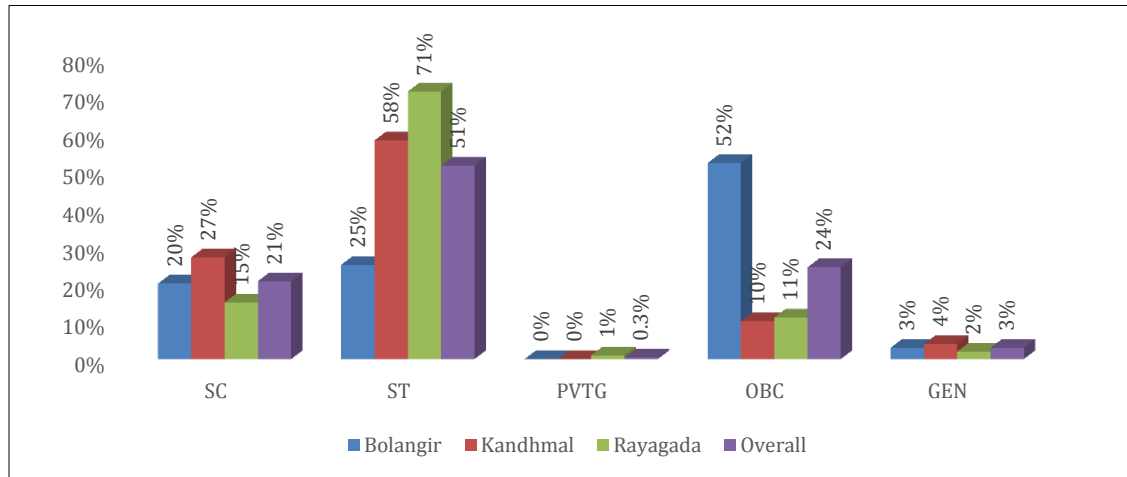


(Gen=General; OBC=Other Backward Classes; PVTG= Particularly vulnerable tribal group; SC=Scheduled Caste; ST=Scheduled Tribe)

In Kandhamal and Rayagada where there are large Scheduled Tribe populations, participation in Shakti Varta was high from this group (Figure 12). The 2011 Census found that Scheduled Tribes made up 52% and 56% of the populations in these two districts, and made up 58% and 71% of participants in Shakti Varta meetings respectively. Scheduled Caste participation was also in proportion to their share of the population or greater for each district. Scheduled Castes made up 20%, 27% and 15% of participants in Bolangir, Kandhamal and Rayagada and were found to be 21%, 15% and 12% of the population of those districts in the Census 2011. By contrast in

Bolangir where there is a larger population of OBC as compared to Scheduled Caste and Scheduled Tribe, the participation of women from OBCs in Shakti Varta meetings was higher at almost 52%.

Figure 11: Women’s participation in Shakti Varta meetings by social group



Overall, the MIS shows that members of disadvantaged social groups made up the largest share of participants at Shakti Varta meetings. The MIS data was collected at the time of the Shakti Varta meeting and the lack of incentive to encourage false reporting of participant’s caste or tribal status suggest that the MIS data is relatively reliable on social background of participants. The household survey data shows that the prevalence of Scheduled Tribe and Schedule Caste women reporting to have attended Shakti Varta was slightly lower than for other caste groups showing some inequity. However, as 65% of women interviewed were from these caste groups, the relative numbers of women attending Shakti Varta from these groups are higher compared to other caste groups, which is in line with the MIS findings.

6.1.3.3 Qualitative research findings on who attended Shakti Varta meetings

Almost every FGD showed that attendance of men in the Shakti Varta meetings was negligible. Most men worked as daily wage labourers and could not afford to lose a day’s income although some of the men were very interested in Shakti Varta and encouraged the women in their families to attend the meetings.

In the villages of Nedisahi and Keutapali, the meetings could not be attended by some of the mothers because their infant children create disturbances. In Keutapali, a few mothers, whose children were more than 10 years old, thought that these meetings were not meant for them and this thinking kept them away from it. In some of the cases, mothers with children less than one year old, were unable to attend the meetings because the family members were reluctant to give their consent as their children were in the infant stage (Kalijharan, Balangir Block in Bolangir)

Shakti Varta participants and GP Facilitators mentioned no social or communal discrimination in who participated in meetings. It was specially mentioned by the participants of the FGDs at Nedisahi, Gundaribadi and Keutapali that people of all social and communal categories attended the Shakti Varta meetings and no discrimination was seen among them.

However, in Kolnara Block Rayagada, some people didn't want to go to other hamlets to attend meetings. This was most prevalent in the Harijan (Scheduled Caste) hamlets.

“The people of the village suggested carrying out of the meetings in every hamlet of the village because some of the people did not want to go other hamlet. These problems were especially occurring among the Harijan basti people.”

Kolnara Block, Rayagada

Shakti Varta was designed to be inclusive and to target vulnerable communities. It carefully mapped each Gram Panchayat identifying road and communication networks, geographical barriers, hamlets and health and nutrition services. Shakti Varta points were located bearing in mind accessibility, and facilitators were selected from disadvantaged communities. Instances of people from different caste/tribal communities not willing to participate in mixed caste/tribal meetings were rare and where they did occur efforts were made by facilitators to bring the communities together as reported below. Populations living in remote hamlets were however at a disadvantage to reach Shakti Varta points and this was one reason why the ratio of Shakti Varta points to population was reduced to 1:300 in remote areas.

6.1.3.4 Attendance of FLWs at Shakti Varta meetings from 2016 survey and MIS

Table 19 outlines the prevalence of FLWs who reported having ever attended any Shakti Varta meetings across the three Wave I districts from the 2016 survey.

The prevalence of FLWs who reported having ever attended SV meetings was high at 87.1% across all the three districts. Among the three districts, this figure was highest in Bolangir at 90.8%, followed by Rayagada (85.6%) and then Kandhamal (81.8%).

Table 19 Percentage of FLWs who have ever attended SV meetings by district (2016 household survey)

District	n	No. FLWs ever having attended SV meeting	% FLWs ever having attended SV meeting
Balangir	305	277	90.8
Rayagada	243	208	85.6
Kandhamal	143	117	81.8
Total	691	602	87.1

In the FLW survey, FLWs were not questioned on how many meetings they attended, however the findings corroborate Shakti Varta MIS data which also showed high FLW participation, especially by AWWs. Shakti Varta MIS shows that around two thirds of meetings were attended by ASHAs and three quarters of meetings attended by AWWs (Table 20).

Table 20: Percentage of Shakti Varta meetings with participation of AWW and ASHA by district (from MIS)

District	Percentage of meetings in which ASHAs participated	Percentage of meetings in which AWWs participated
Bolangir	60%	72%
Kandhamal	68%	81%
Rayagada	69%	69%
Total	65%	74%

Attendance of AWWs and ASHAs varied slightly over the 20 meeting cycle in each district. There was a trend of increasing ASHA participation as the meetings progressed, while AWW participation remained high throughout.

6.2 Diffusion of Shakti Varta messages

6.2.1 Findings on diffusion from the endline qualitative study

6.2.1.1 Focus group discussion with SV participants

Focus Group Discussions (FGDs) with Shakti Varta participants explored the extent and intensity of the diffusion of messages of the PLA meetings. According to the participants, the messages had been widely diffused. Almost every participant mentioned that she had shared the messages at home with her husband, in-laws and other relatives as well as in her neighbourhood. Messages had also been shared with Sarpanch and Ward Members and discussed at SHG meetings. The messages which had been diffused, included the effective way of hand washing with soap, use of mosquito nets to prevent malaria, cleanliness, taking care of new-born babies, advantages of toilets, disadvantages of open defecation, and use of slippers while defecating.

A few of the participants at Nedisahi cited increased attendance at the AWC due to diffusion of Shakti Varta messages.

6.2.1.2 Tracking and quantification of diffusion of messages

First and second degree diffusion: Out of the 72 Shakti Varta participants interviewed in the endline qualitative study, the majority i.e. 71 (98.6%) reported that they shared the messages they learned in the meeting with 95 people. Out of these 95 recipients of first-degree diffusion of the messages, 59 shared the messages learned from the Shakti Varta meetings with 69 people. In total, 164 people received Shakti Varta information from first and second-degree diffusion of the messages.

Of these 164 first and second-degree recipients, the majority i.e. 78.0% (n = 128) were females and 22.0% (n = 36) were males (Table 21). Among them, 61.6% (n = 101) were aged 16 to 30

years and 26.2% (n = 43) were aged 31 – 45, followed by 6.7% (n = 11), aged 46 to 60 years, 3.7% (n = 6) were children below 15 years of age and 1.8% (n = 3) of those who received the Shakti Varta messages, were aged over 60 years of age. This indicates that the maximum sharing of messages i.e. 87.8% (n = 144) happened among people aged 16 to 45, which is the prioritized target population for Shakti Varta.

Table 21: Age group and gender of first and second degree recipients of diffusion of the Shakti Varta messages

Category		% (N=164)
Age	Less than 15 years	3.7%
	Age in between 16 to 30 years	61.6%
	Age in between 31 to 45 years	26.2%
	Age in between 46 to 60 years	6.7%
	More than 60 years	1.8%
Gender	Male	22.0%
	Female	78.0%

Number of times the Shakti Varta participants shared messages with others: With regard to the frequency of sharing messages, the study found that a quarter of participants (n = 41) reported to have shared the message four times, followed by 21.3% (n = 35) who shared the message five times. Table 22 shows the total frequency of sharing messages reported by participants.

Table 22: Number of times the Shakti Varta participants shared messages with first and second-degree recipients of diffusion of the Shakti Varta messages

Number of times messages were shared	% (N=164)
1	6.7%
2	6.7%
3	11.0%
4	25.0%
5	21.3%
6	14.6%
7	4.3%
8	1.8%
9	1.2%
More than 10 times	7.3%
Total	100.0%

Places where messages were shared: The study revealed that most messages were shared at home (73.8%, n = 121) occurred at home, followed by 15.2% (n = 25), who received the messages with others at others’ houses (Table 23). Other places, where Shakti Varta messages

were shared included open sites, when the women went to relieve themselves (3.0%, n = 5) and drinking water sites 1.2% (n =2).

Table 23: Places where the messages were shared to the first and second degree recipient of the diffusion of Shakti Varta messages

Place where the messages were shared	% (N=164)
At home	73.8%
At other's home	15.2%
At open defecation site	3.0%
At drinking water site	1.2%
At AWC	0.0%
At community meeting	0.0%
At SHG meeting	0.0%
Total	100.0%

Maximum distance from participant's house where the messages were shared: The majority of people (92.7%, n = 152), who received the Shakti Varta messages were located in a radius of less than 100 meters from the houses of those who shared the messages. Table 24 shows the full breakdown of reported distances from those who shared messages. The findings indicate that almost all sharing of Shakti Varta messages occurred within the village.

Table 24: Maximum distance from the participants house where they shared the messages to the first and second-degree recipients of diffusion of Shakti Varta messages

Distance	% (N=164)
Less than 100 meters	92.7%
Distance in between 101 to 500 meters	3.6%
Distance in between 501 to 1000 meters	2.4%
Distance more than 1000 meters	1.2%
Total	100.0%

Time of sharing the message: While 61.6% (n = 101) of participants shared the Shakti Varta messages in the evening, 26.2% (n = 43) shared in the night and 9.1% (n = 15) shared the message in the afternoon (Table 25).

Table 25: Timing of sharing the messages to the first and second degree recipients of diffusion of Shakti Varta messages

Time when the messages were shared	% (N=164)
Morning time	1.2%
Before Noon	1.8%
Afternoon	9.1%
Evening	61.6%
Night	26.2%
Total	100.0%

PLA Participant’s relationship with who they shared the messages: Group members’ responses on their relationships with the people with whom they shared the Shakti Varta messages are mixed. While 31.1% (n = 51) reported that they shared the messages with neighbours, 15.2% (n = 25) shared with husbands and 10.4% (n= 17) shared with friends. Further people that messages were reported to be shared with are presented in Table 26.

Table 26: PLA Participant’s relationship to the first and second degree recipient of diffusion of the Shakti Varta messages

Relationship to the respondent	% (N=164)
Husband	15.2%
Son or daughter	8.5%
Son in-law or daughter-in-law	4.9%
Father in law or mother in law	6.1%
Brother in law or sister in law	7.9%
Other relatives (including cousins)	4.9%
Friends	10.4%
Neighbours	31.1%
Total	100.0%

6.3 Reported changes in knowledge and awareness

6.3.1 Changes in reported knowledge from 2014 and 2016 surveys

6.3.1.1 Pregnancy and post-partum period

In the 2014 and 2016 surveys, married or cohabiting women aged 15 to 49 were questioned on their knowledge of critical danger signs during pregnancy, labour, post-partum period and for newborns. A small increase in knowledge was seen in 2016 compared to 2014 in all four areas (Table 27). This ranged from around 2.6% more women who knew of the four key danger signs

during labour (severe vaginal bleeding, swollen legs /face, blurred vision) to 6.5% more women who knew of the three key danger signs for women during the postpartum period (severe vaginal bleeding, foul smelling discharge, high fever).

However, despite these increases, less than 10% of women knew of the critical danger signs for any of the four areas probably reflecting the specific nature of the questions - women may have known about some of the danger signs but not all.

Table 27 Knowledge of danger signs during pregnancy, labour, postpartum period and in newborns of married or cohabiting women aged 15-49 (LCU=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Women 15-49 years who know 3 key danger signs in pregnancy ¹	1.9	1.6	2.1	26,402	4.6	3.9	5.5	25,673
Women 15-49 who know 4 key danger signs during labour ²	3.2	2.8	3.7	26,402	5.8	4.9	6.8	25,673
Women 15-49 who know 3 key danger signs for women during the postpartum period ³	2.3	1.9	2.7	26,402	8.8	7.7	10.1	25,673
Women 15-49 who know 4 key danger signs for newborns ⁴	1.6	1.4	1.8	26,293	5.5	4.7	6.4	25,116

¹Danger signs in labour: severe vaginal bleeding, swollen legs /face, blurred vision

²Danger signs in pregnancy: severe vaginal bleeding, prolonged labour, convulsions, retained placenta

³Danger signs in postpartum period: severe vaginal bleeding, foul smelling discharge, high fever

⁴Danger signs in newborns: convulsions/spasms/rigidity, breathing problems, very small baby, lethargy / unconsciousness.

More women know the recommended number of ANC checks during pregnancy in 2016 compared to 2014 (Table 28).

Table 28 Antenatal Care knowledge in married women aged 15-49 (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Women aged 15-49 aware of the recommended number of ANC checks in pregnancy (at least 4)	17.3	16.5	18.2	26,371	25.8	24.3	27.4	25,673

6.3.1.2 Infant and young child feeding

Women's knowledge of how long after birth a newborn baby should be put to breast was very high in both 2014 and 2016 (Table 29).

Table 29 Knowledge of timely initiation of breastfeeding (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Women who know how long after birth a newborn baby should be put to breast	94.3	93.8	94.8	26,402	92.7	91.9	93.3	25,673

6.3.2 Changes in reported knowledge from most significant change stories collected through process documentation

6.3.2.1 Infant and young child feeding

Stories of most significant change collected as part of the programme’s process documentation suggest that Shakti Varta meetings have increased discussion and awareness of infant and young child feeding. Village women reported that discussions on nutrition and child feeding practices were earlier mostly confined to the home with very little opportunity for women to share their stories, seek inputs from one another and clarify doubts.

“I have so many doubts about when to stop breastfeeding, what to give as supplementary feed, what to cook and how to ensure nutritious diet for my new born baby. There is no other woman in the house. It is only my father/brother-in-law and husband. Ever since I have come to know ASHA and SV didi I am reassured and well guided.” SHG member, Rayagada

“Earlier no one really talked about these issues since they were not considered to be very important. Now, it is different. Women talk amongst themselves, advising one another on diet. Within the household too there is open discussion amongst pregnant and lactating mothers, older women as well as men who earlier rarely participated in such discussions.” Arunar Bivar of Podomora village of GP Kumbhikota, Rayagada district says

“I got exact guidance on when and how to introduce soft, semi-solid foods after exclusively breastfeeding my baby for 6 months. It was in the 7th month that I introduced *dal* water, ground rice boiled with water and *chatua* every 2-3 hours and to give feed whenever the baby cried.” Kumudini Rana Sainatala, Chitamara, GP Bhadra, Bolangir district

Excerpts from Stories of Most Significant Change

6.3.2.2 Reported changes in awareness of safe sanitation and hygiene practices from 2014 and 2016 survey

Awareness of toilet construction

One third of FLWs (32.1%) reported that the Shakti Varta meetings created awareness about building toilets, with the highest proportion of FLWS reporting this observed in Kandhamal (39.9%) (Table 30).

Table 30 % of FLWs who reported that SV meetings create awareness for building toilets across three Wave I districts

District	No. FLWs providing answer to this question	No. FLWs reporting SV meetings created awareness of building toilets	% FLWs reporting SV meetings created awareness of building toilets
Balangir	305	83	27.2
Rayagada	243	82	33.7
Kandhamal	143	57	39.9
Total	691	222	32.1

Hand washing with soap at critical moments

FLWs were asked whether they knew the five critical moments for hand washing (after defecation, after cleaning a child, before preparing food, before feeding a child, and before eating). In all districts, awareness among FLWs about all five critical moments for handwashing appears to have improved, changing from 5.5% in 2014 to 28.4% in 2016 (Table 31).

Table 31 Percentage of FLWs who know the five critical moments for hand washing with soap

Districts	2014 (n=662)			2016 (n=753)		
	No. FLWs answering the question	No. FLWs answering that they knew the 5 critical moments for hand washing	% FLW's answering that they knew the 5 critical moments for hand washing	No. FLWs answering the question	No. FLWs answering that they knew the 5 critical moments for hand washing	% FLW's answering that they knew the 5 critical moments for hand washing
Balangir	235	14	6.0	316	102	32.3
Rayagada	197	8	4.1	274	89	32.5
Kandhamal	210	13	6.2	163	23	14.1
Total	642	35	5.5	753	214	28.4

6.4 Reported changes in HNWASH practices

6.4.1 Changes in reported maternal and child practices from 2014 and 2016 survey

The prevalence of pregnant women who reported to have registered their current pregnancy at AWC was fairly high in both 2014 and 2016, although this appears to have increased slightly since 2014 (Table 32). The percentage of pregnant women receiving a take home ration from the AWC in the previous month increased from 63.2% to 72.2%. Coverage of take home rations was lower for pregnant women than for breastfeeding women with a child under two in both 2014 and 2016.

Table 32 Pregnancy registration at AWC and coverage of take home rations (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Pregnant women who registered their current pregnancy at AWC	81.4	79.9	82.8	3,730	88.5	87.3	89.6	3,305
Pregnant women receiving a take home ration from the AWC the previous month	63.2	61.3	65.2	3,730	72.2	70.3	74.0	3,305
Breastfeeding women with a child < 2 years of age receiving a THR from the AWC the previous month	92.1	91.3	92.8	8,351	93.1	92.2	93.9	9,134

The prevalence of pregnant women who reported to take extra rest during pregnancy than before they were pregnant nearly doubled in 2016 compared to 2014 (Table 33), although still only half of women reported this in 2016 which is likely to be related to the high livelihood and domestic work burdens they carry.

Table 33 Practices during pregnancy (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Pregnant women who took extra rest during pregnancy than before they were pregnant	28.9	27.2	30.7	3,732	47.6	45.2	49.9	3,306

6.4.2 Most common reported practices adopted by women who had participated in Shakti Varta meetings or only heard of them from 2016 survey

The most common practices reported by pregnant women who had attended Shakti Varta meetings were rest during pregnancy (reported by 80% (95% CI 77.4-83.8)), using bed nets and handwashing (Table 34). Reported practices adopted by women with a child under five who had attended any Shakti Varta meetings focused on newborn care.

Table 34 Most common practices adopted by pregnant women and women with a child under five after attending Shakti Varta meetings

Indicator	Most common (top 3) practices reported by respondents after attending Shakti Varta meetings	%	Lower CI	Upper CI	n
Pregnant women	Ensuring rest during pregnancy	80.8	77.4	83.8	659
	Using bed nets	68.2	64.4	71.7	
	Using soap for handwashing after defecation	46.9	42.5	51.3	

Indicator	Most common (top 3) practices reported by respondents after attending Shakti Varta meetings	%	Lower CI	Upper CI	n
Women with a child under 5 years	Put baby to breast within one hour of delivery	54.9	52.3	57.5	4,537
	Practiced wiping, wrapping and delayed bathing of newborn	53.1	50.6	55.6	
	Practiced proper naval care of newborn	45.6	42.9	48.4	

Women who had only ever heard of Shakti Varta meetings but had never attended were asked if they were implementing any practices after hearing from other community members (Table 35). In line with those who attended Shakti Varta, the most common practice reported by nearly three quarters of pregnant women who had only ever heard of Shakti Varta was ensuring rest during pregnancy (73.5% (95% CI 69.5-77.1)). Around half of women with a child under five years of age reported to be giving colostrum, to have delivered their last child in an institution and/or using bed nets.

Table 35: Most common practices adopted by pregnant women and women with a child under five after hearing from other community members

Indicator	Most common (top 3) practices reported after hearing from other community members (respondents who had only heard of Shakti Varta)	%	Lower CI	Upper CI	n
Pregnant women	Ensuring rest during pregnancy	73.5	69.5	77.1	530
	Using bed nets	57.9	53.2	62.5	
	Using soap for handwashing after defecation	35	31	39.3	
Women with a child under 5 years	Gave colostrum	49.1	46.8	51.5	5,037
	Delivered last child in institution	47.5	44.7	50.3	
	Using bed nets	41.2	38.7	43.7	

6.4.3 Changes in maternal and child health practices reported by qualitative research and process documentation

During the qualitative endline study, FLWs in Nedisahi and Gadba villages reported that before Shakti Varta pregnant women were reluctant to consume iron tablets due to perceived side effects. Through Shakti Varta women had learned of the benefits of iron tablets and this had led to an increase in their use.

Shakti Varta participants and FLWs reported that people had become much more inclined towards institutional deliveries after the Shakti Varta meetings. A large number of women had shifted from home deliveries to institutional deliveries due to the dissemination of messages about the advantages of institutional deliveries vis-à-vis the disadvantages of home deliveries. In Birighat, women also cited an improvement in mortality rates.

In the collection of stories of most significant change, women also reported how they, the GP Facilitator and FLWs identified and tracked high-risk pregnancy cases, and advocated for pregnant and recently delivered women.

“The fact that we know each other and live in the same neighbourhood makes it easy for us to share knowledge. Even when we do not know a particular family, we still go and talk to them, share their concerns and offer advice. Manorama, a young unmarried girl who attended SV meetings regularly, took responsibility of ensuring her pregnant neighbour took IFA tablets regularly. She reprimanded her when she missed taking them telling her that next time she missed it, she would bring it to the notice of ASHA or Shakti Varta didi at the next SV meeting. This kind of gentle pressure worked and in due course the pregnant woman on her own told Manorama she was having IFA tablets on time.” Lalita Kanhar, Shakti Varta Facilitator, Sadingia GP, Phiringia

“My daughter was born in the hospital but once we came home, we were both isolated and kept in the cattle shed which was neither airy nor well lit. It was strewn with cow dung, cobwebs and unclean patches. It was only when the Shakti Varta facilitator visited me that she spoke with my in-laws and drew attention of AWW and ANM didi who impressed upon the family to keep the baby and me inside the house in a warm and clean place.” Una Mohapatra, Kandhamal

In several villages, Shakti Varta facilitators have successfully identified high risk pregnancies and women with a history of spontaneous abortions and infant deaths. Tanmayee Ghibela, resident of xxx village was identified by Lopamudra Sahu, Shakti Varta facilitator. Her family survives on daily wages from construction work. She was barely 18 when she conceived and her body was not ready for motherhood. This and the next pregnancy resulted in spontaneous abortions. Recalls Lopamudra, “Both times, she registered at AWC but failed to take proper care of herself.” When Tanmayee became pregnant the third time, Lopamudra marked her out as a high-risk mother. Further, she planned with AWW and ASHA to take care of her jointly. Together, they made sure she did not miss any Shakti Varta meeting. Cuddling her newborn baby, she says “I remember all the sessions - Power Game, Stick Game, Voting Game, storytelling and picture cards. All this helped as both my husband and I realised we needed to change the way we looked after my health during pregnancy. We also realised that my pregnancy would benefit from services that were available at the AWC and health centre.”

Excerpts taken from Stories of Most Significant Change

6.4.4 Reported changes in hygiene and sanitation practices among community women from 2014 and 2016 surveys

Mothers of children under five reported increased hand washing at critical moments and increased safe disposal of their own and their children’s faeces between 2014 and 2016 (Table 36). However less unmarried adolescent girls (10-19) reported hand washing at the three critical moments in the day in 2016 compared to 2014.

Table 36: Hand washing and disposal of excreta among mothers of children under five and adolescent girls 10-19 (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Mothers of children <5 years who wash their hands at 5 critical moments in the day	8.7	7.9	9.6	21,339	21.0	19.2	22.8	21,875
Mothers of children <5 years reporting safe disposal of own faeces at last	5.8	4.7	7.2	21,339	12.0	10.0	14.3	21,875

defecation								
Mothers of children <5 years reporting safe disposal of child faeces at last defecation	3.6	2.7	4.8	21,341	8.6	7.0	10.6	21,875
Unmarried adolescent girls 10-19 who wash their hands at 3 critical moments in the day	35.6	34.1	37.2	8,658	22.0	20.4	23.8	9,326

In all three districts, the prevalence of mothers of children under five reporting to wash their hands at five critical moments in a day doubled in 2016 compared to 2014 with the highest prevalence seen in Bolangir (Table 37).

Table 37: Hand washing among mothers of children under five by district (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator		2014				2016			
		%	LCI	UCI	n	%	LCI	UCI	n
Mothers of children <5 years who wash their hands at 5 critical moments in the day	Bolangir	13	11.7	14.4	9,740	28.5	25.8	31.4	9,417
	Kandhamal	6.4	5.1	8	4,903	14.9	12	18.4	5,409
	Rayagada	3.7	2.8	5	6,696	14.2	10.9	18.1	7,049

6.4.5 Reported changes in hygiene and sanitation practices among community people from qualitative research

The endline qualitative study found that Shakti Varta participants overwhelmingly agreed that Shakti Varta had increased awareness of the harm of open defecation, changed community understanding about the benefits of using toilets, stimulated many people to start building toilets and for those who had toilets, to start using them. There was a strong perception among participants that open defecation was declining due to Shakti Varta. These views were also endorsed by the Frontline Workers interviewed in the same villages.

6.4.6 Reported changes in hygiene and sanitation practices among Frontline Workers from 2014 and 2016 surveys

FLWs were asked about safe disposal of their own faeces last time they defecated. Safe disposal of own faeces remained similar between 2014 and 2016, although there may be an increase in Khandhamal (Table 38).

Table 38: Percentage of FLWs reporting safe disposal of own faeces

Districts	2014 (n=662)			2016 (n=753)		
	No. FLWs answering this question	No. FLWs reporting safe disposal of own faeces	% FLWs reporting safe disposal of own faeces	No. FLWs answering this question	No. FLWs reporting safe disposal of own faeces	% FLWs reporting safe disposal of own faeces
Bolangir	235	110	46.8	316	138	43.7
Rayagada	197	66	33.5	274	99	36.1
Kandhamal	211	54	25.6	163	63	38.7
Total	643	230	35.8	753	300	39.8

Table 39 shows the prevalence of FLWs reporting to have seen anyone openly defecating in village/outside in the last seven days. In 2014, the majority of FLWs reported to have seen open defecation being practiced, but this appears to have reduced slightly in 2016, except in Bolangir, although the reasons for this are unclear.

Table 39: Percentage of FLWs who have observed community members practicing open defecation in the last 7 days

Districts	2014 (n=662)			2016 (n=753)		
	No. FLWs answering this question	No. FLWs reporting having seen anyone openly defecating in village/ outside in the last seven days	% FLWs reporting having seen anyone openly defecating in village/ outside in the last seven days	No. FLWs answering this question	No. FLWs reporting having seen anyone openly defecating in village/ outside in the last seven days	% FLW's reporting having seen anyone openly defecating in village/ outside in the last seven days
Bolangir	235	177	75.3	316	269	85.1
Rayagada	197	196	99.5	274	229	83.6
Kandhamal	210	199	94.8	163	130	79.8
Total	642	572	89.1	753	628	83.4

Hand washing with soap at critical moments

FLW's were also asked about hand washing with appropriate cleansing agent (soap, ash or detergent). Overall appropriate handwashing practices appear to have improved from 80.2% of FLWs using an appropriate cleansing agent in 2014, and 99.1% in 2016 (Table 40).

Table 40: Percentage of FLWs who report hand washing with an appropriate cleansing agent

Districts	2014 (n=662)			2016 (n=753)		
	No. FLWs answering the question	No. FLWs reporting hand washing with appropriate cleansing agent	% FLWs reporting hand washing with appropriate cleansing agent	No. FLWs answering the question	No. FLWs reporting hand washing with appropriate cleansing agent	% FLWs reporting hand washing with appropriate cleansing agent
Balangir	235	187	79.6	316	314	99.4
Rayagada	197	166	84.3	274	269	98.2
Kandhamal	210	162	77.1	163	163	100
Total	642	515	80.2	753	746	99.1

6.5 Reported community action resulting from Shakti Varta

6.5.1 Participation in community level activities from 2016 survey

The 2016 survey indicated that cleaning of village roads and common places was the most common community level activity after attending Shakti Varta meetings, reported by 36.0% (95% CI 31.9-40.4) of women (Table 41). Around half of women reported that they have not participated in any community level activities following their attendance at the meetings.

Table 41: Top community level activities adopted by pregnant women and women with a child under five after attending Shakti Varta

Top community level activities adopted by respondents after attending Shakti Varta meetings (pregnant women and women with a child under five)	%	Lower CI	Upper CI	n
Cleaning village roads/common places	36	31.9	40.4	5,214
Clean water sources, tube wells, wells, ponds etc.	23.3	20.3	26.7	
Special village rally / meeting for social causes like stopping child marriage, addressing open defecation etc.	15.9	13.8	18.3	
Did not participate in any community level work	51.8	46.8	56.7	

6.5.2 Collective action resulting from Shakti Varta reported in qualitative research and process documentation

Case studies collected and reported in the Process Document 2 state that many women's SHGs have pledged to stop open defecation, and introduced fines for those found defecating in the open (for example Dadi village in Kandhamal District). In Madhupur, SHG members took the SV message on hand washing outside the SV point and into the AWC preschool and local

government school by holding talks and demonstrations on hand washing, and following it up with weekly visits to ensure this was being practiced.

In Gumuda village, Rayagada, the Shakti Varta facilitator reported that “One day, after the meeting (*SV meeting*), the women decided they would clean the entire village on the first Sunday of every month. There were 42 women who had participated in that meeting. They initiated it in June 2015. The sanitation drive attracted the participation of 158 men and women.”

Shakti Varta participants have also taken the principle of collective action to mobilise women and adolescents behind other social and development causes, including banning of alcohol as in Narla and Karlamunda Block in Kalahandi District and banning child marriages.

“Kendu Mundi is an alcohol-free village, thanks to the women in the community. The community levies a fine of Rs. 501 to anyone who even brings alcohol into the village,” GP Facilitator, Kendu Mundi Village, Karlamunda Block, Kalahandi District

According to the CDPO of Kandhamal, Shakti Varta was proving to be an efficient platform for village community groups like Gaon Kalyan Samiti, Mothers’ Committee, Jaanch Committee, and SHGs to come together and solve village issues.

“The games that we play during the Shakti Varta meetings have triggered an understanding and realisation among the women of the community that a lot can be achieved collectively.” Dhobani Meher, Shakti Varta Facilitator, Loisingha village

“In the Stick Game, I ask any woman from the group to come forward. I give her a stick and ask her to break it. She breaks it easily. Then, I give her 2-3 sticks and ask her to break them together. She breaks these using some strength. Then I give her a bundle of sticks tied together and ask her to break the bundle. She is not able to break the bundle. I ask others too to do so but they too are unable to do so. The group then discuss about the strength that lies in groups and how, together, they can bring about a transformation in the health, nutrition and hygiene status in the community. The surprising thing is that the game demonstrated to them how they can integrate this principle in many other aspects of their life. As a result of this new awareness, they collectively set about constructing a road in the community, taking action themselves, instead of waiting for someone else to support them.” says Premolata, SV Facilitator, Gopalpur Village, Bolangir.

Excerpt from Stories of Most Significant Change

6.5.2.1 Social cohesion

Deeply entrenched social norms that maintain the separation of castes and tribal groups persist in Odisha. In Khajuripada, Shakti Varta was said to have united community members to take village decisions together and was building social solidarity. Case story material, such as that below show examples where Shakti Varta is helping to build social cohesion and connection between different social groups in some areas.

The Shakti Varta facilitator in Tudipaju Gram Panchayat of Phulbani block, faced this situation when she began preparations to organise a village meeting at Budharani village. People from the Scheduled Caste community residing in Padar hamlet and the Scheduled Tribe community residing in the neighbouring Majhi hamlet simply refused to come and sit together. The Padars are landless people dependent on daily wage labour whereas the Majhis generally own some land and depend on vegetable cultivation. “The Scheduled Tribe community considers itself higher in the caste hierarchy. The practice of untouchability is prevalent in these areas. For the Padars and the Majhis, the very thought of sitting side-by-side in a village meeting was abhorrent,” recalls the SV facilitator.

After a lot of persuasion, Majhi women agreed to come if they were made to sit a little away from Padar women and also on a different rug! The facilitator agreed to their condition and arranged for separate rugs for the two communities.

During the meeting, the Stick Game was played. At least some women from both the communities seemed to absorb the message that if communities work together they gain power to change their situation. The meeting then progressed to the Power Walk game where the power equation in the community is demonstrated through their own admission that women and men from different sections of the community are able to reach different levels of “power” or access to entitlements and services. This time, when the facilitator requested for volunteers, women from both communities came forward and played the game together.

Excerpt from Stories of Most Significant Change

6.6 Women’s empowerment and agency

6.6.1 Reported changes in women’s empowerment from 2014 and 2016 surveys

In terms of decision-making power, the prevalence of women 15-49 reporting involvement in major, or daily/minor household purchases, or in the spending of their husbands earnings appears to have remained similar, or in the case of the latter two, may have decreased slightly between 2014 and 2016 (Table 42) with around two thirds to three quarters of women reporting this at both time points. Women reporting control over personal decisions affecting their daily lives appears to have increased.

Table 42: Perceived female empowerment in decision-making among married or cohabiting women aged 15-49 (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator	2014				2016			
	%	LCI	UCI	n	%	LCI	UCI	n
Women 15-49 involved in decisions about major household purchases	63.9	62.4	65.4	16,725	65.7	63.9	67.5	16,958
Women 15-49 involved in decisions about daily/minor household purchases	75.0	73.5	76.4	19,587	68.8	67.1	70.4	17,731
Women 15-49 who have a say in the spending of their husband's earnings	74.8	73.3	76.2	19,841	67.7	66.0	69.4	17,459
Women 15-49 reporting perceived control over	46.8	44.9	48.6	12,478	58.7	57.1	60.3	14,680

personal decisions affecting daily life								
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Perceived power for women to change community practices appears to have improved between 2014 and 2016. Married or cohabiting women aged 15-49 reported a 30% improvement in their perception that women like them could change things in the community ‘fairly or very easily’; from 19.2% (95% CI 18.0-20.4) to 49.2% (95% CI 47.0-51.3) (Table 43). Reported perceptions that women have the collective power to improve community life stayed roughly constant between 2014 and 2016.

Table 43: Perceived power for women to change community practices among married or cohabiting women aged 15-49 (LCI=Lower Confidence Interval; UCI=Upper Confidence Interval)

Indicator		2014				2016			
		%	LCI	UCI	n	%	LCI	UCI	n
Women 15-49 reporting the ease with which women like them can change things in their community	Fairly or very easily	19.2	18.0	20.4	4,751	49.2	47.0	51.3	10,367
	With a little or a great deal of difficulty	51.2	49.7	52.7	12,634	41.0	39.0	43.1	9,015
	No, not at all	29.7	28.0	31.4	7,298	9.8	8.8	11.0	2,048
Women who feel that together women in the community can make a difference to improve community life		58.1	56.0	60.2	14,808	58.0	55.7	60.3	12,550

6.6.2 Reported changes in women’s empowerment from qualitative research and process documentation

In several of the focus group discussions in the endline qualitative study, Shakti Varta participants reported how after Shakti Varta, women who were typically shy and did not participate in family discussions found their confidence and started to speak out. In the villages of Bisamkatak and Khajuripada, GP facilitators shared how women who participated in Shakti Varta meetings had also started participating in other village meetings and sharing their opinions.

In rural areas where the physical mobility of women is heavily restricted by social taboos and lack of roads and transport, Shakti Varta facilitators are required to travel across an entire Gram Panchayat covering distances up to 12 kilometres in some areas.

"We women in villages are not used to moving around without a male escort, especially after sun set. Moreover, there is no public transport available. After I married and moved into my husband's home, my movement was largely restricted. I began moving around for the first time over such vast distances only after I became a Shakti Varta facilitator. My in-laws have never raised any objection to my work and my husband has been extremely supportive. He used to accompany me in the initial days to the venue as I was unsure of the routes." Chinky Bagart, GP facilitator

"It is difficult to go to distant villages, and initially my husband would not support me but I was determined to do the job at any cost. On the day of the first meeting, I reached the venue an hour before the scheduled time of the meeting, met with the AWW, ASHA and SHG members of the village. I shared with them details about our Shakti Varta programme and invited community members through door-to-door contact with the help of AWW, ASHA, AWH and SHG leaders and active volunteer members." Lata Hail, GP facilitator

Excerpts from Stories of Most Significant Change

Many GP Facilitators report in process documentation and qualitative research how the training, and exposure they received as facilitators has helped them find agency and self-confidence. Through the new leadership roles and social activities that the women are involved in they have acquired new status within their homes and the community, and have greater influence and capacity to support the empowerment of others.

"Even though I only studied till Standard III, as a Shakti Varta facilitator, my opinions matter, not only to my family but also to the community." Subashree, Shakti Varta Facilitator in Gram Panchayat Kumbhar Dhamni

"How can we bring about change if we don't even have the courage to step outside the home?" Rajeshree, Shakti Varta Facilitator

"Women are placing greater trust in us as we help them navigate difficult situations, gain access to government schemes like MAA gruha and the Rs 5000 incentive through Mamata for institutional delivery. Many of us accompany them to register their pregnancy and follow-up hospital visits. They are no longer as shy as they used to be and are now openly talking on taboo subjects like puberty, sanitary napkins and breast feeding, which was not the case earlier." Shakti Varta Facilitator

"The biggest change is that women now themselves come to us, asking when is the next immunisation schedule. Earlier we had to go and plead with them, remind them and keep drilling importance of immunisation." CDPO, Muniguda block, Rayagada

Excerpts from Stories of Most Significant Change

7 VALUE FOR MONEY

Shakti Varta was one component of a larger DFID funded WASH project in Odisha. The VfM performance of Shakti Varta as a part of the WASH project was assessed against the '4 E's' framework of economy (procurement of right quality inputs at a right price), efficiency (quality, quantity and timeliness of outputs produced by inputs), effectiveness (outcome/impact) and equity.

Economy

Procurement of NGO implementing partners for Shakti Varta in each of the Wave I districts was through a competitive process which kept prices low while following standard good procurement practice. The unit cost of person days for the three local NGOs, are INR 315 (£3). Similarly the average cost of travel per staff per month are INR 1233 (£13). The human resource and travel costs are highly economical in view of market rates and average costs of travel in the geographical areas.

Training of GP Facilitators was spread out over five phases and provided through a cascading training approach. The average cost of training a GP facilitator in the three Wave I districts including the costs of training at state, district and block level is INR 5968 (£65). This rate is highly economical in terms of the current market price.

Efficiency

Efficiency is defined as how well inputs are converted to outputs and how resources are optimally used to get the best results. The major output for Shakti Varta is PLA meetings. Across the three Wave I districts some 92% of PLA meetings against target were held, showing a high efficiency.

Cost-efficiency of Shakti Varta has been measured by calculating the cost of providing behaviour change communication through Shakti Varta meetings per person. The costs of holding meetings was calculated to include the salaries, honorarium, travel, training and other administrative expenses of TMST core staffs, field staffs, GP level facilitators, partner NGOs and the State Technical Agency. Based on this estimation, the average cost of one meeting is INR 665 (£11). The number of persons attending meetings in the three districts was estimated to be 25-30 per meeting. The estimated cost of increasing the awareness of one person on Shakti Varta messages through attendance at a Shakti Varta meeting is INR 24 (£0.26).

The evaluation found that 75% of women that attended a meeting shared messages from this meeting with four or more persons. Assuming that the one person who attended the meeting diffuses the information to at least four more persons who have not attended the meeting, the cost of increasing awareness per person is INR 5 (£0.05). The Government of India norm for BCC activities under the National Rural Health Mission/National Health Mission is INR 10 (£0.1) per person. In comparison, Shakti Varta is a cost-efficient method of behaviour change communication.

Effectiveness

This immediate post intervention evaluation has shown that Shakti Varta has likely contributed to improvements in some HNWASH knowledge and practice indicators, enhanced community

action and women's empowerment. The theory of change has been found to be robust. At this early stage of evaluation it is however not possible to measure changes in the primary outcome of neonatal mortality.

Equity

Shakti Varta is targeted to High Burden Districts in the state with the highest infant and child undernutrition. The first wave districts include large numbers of Scheduled Tribes and Scheduled Castes that have the lowest health outcomes in the state and experience high rates of poverty and vulnerability. Participation of Scheduled Tribe and Scheduled Caste populations in Shakti Varta meetings is equivalent to their share of the wider population or greater, and a large number of the GP Facilitators that have been trained by the programme come from these disadvantaged communities. Delivering Shakti Varta in remote and conflict-affected areas has however proven challenging and will require more tailored approaches to tackle the operational bottlenecks and therefore be more effective.

Shakti Varta is contributing to building women's agency and empowerment. The GP facilitators trained by the programme are an asset for their communities, and a force that government programmes can leverage and connect with.

Sustainability

The first sustainability test of Shakti Varta has been the continuation of Wave II meetings after the closure of DFID assistance and the Government's plan to complete the PLA cycle in these 12 districts. A later impact evaluation that can more accurately assess effectiveness and sustainability will be important for policy makers to determine the capacity of community and government institutions to sustain the systems created for Shakti Varta implementation and the individual behavioural, empowerment and institutional benefits.

8 DISCUSSION AND CONCLUSION

Shakti Varta is an ambitious programme that has taken evidence from small scale randomised controlled trials to develop an innovative and large scale community mobilisation programme covering half the population of Odisha State. This evaluation immediately post-intervention in Wave I districts, the learning site for the programme, has identified a variety of design and implementation factors that has affected the quality of implementation and the potential of the programme to achieve results. Despite implementation challenges, the evaluation indicates that Shakti Varta has likely contributed to some improvements in HNWASH indicators, enhanced community action and women's empowerment.

8.1 Implementation

Timeline

WHO recommends PLA interventions with women's groups is implemented for a minimum of three years. PLA meetings were held for 20 months in Bolangir and Rayagada and only 18 months in Kandhamal. Moreover, delays in fund disbursement meant that meetings were squeezed into very short 7-12 day periods in the latter half of the PLA cycle in order to complete before the end of DFID financial and technical support. The short span between meetings impacted the quality of meetings and attendance, and affected the ability of participants to understand, absorb and translate messages into action.

Coverage

The large scale nature of the intervention in very poor, geographically remote, Left Wing Affected and hilly locations presented major implementation challenges. Moreover, the inclusion of all blocks in the focal districts meant that both areas with better and poorer health outcomes were included, though the evidence suggests that PLA is most effective in areas with higher mortality levels.

Scope

The division of a twenty meeting PLA cycle into two mini-cycles was an innovative response to meeting a broad HNWASH agenda but carried the risk of making the PLA process too shallow for the breadth of behaviour change being promoted. Coupled with the very tight timeline exacerbated by fund related bottlenecks, feedback from the community suggests that insufficient time was available to explore difficult subjects at a reasonable pace for poorly educated rural women. This will most likely have affected understanding of messages and the readiness for women and their families to translate them into changed behaviours.

Motivation and retention of GP Facilitators

Mobilising women for meetings was difficult, time consuming and required considerable persuasion of GP Facilitators and the frontline workers that supported them. Low remuneration of Rs 100 per meeting with no extra compensation for mobilising participants or undertaking the

taxing journeys that they had to make to reach Shakti Varta points explains the relatively high drop out rate of about 25% of facilitators. This impacted the quality of meeting facilitation and broader community mobilisation especially in the absence of funds to train new facilitators on training they had missed. Nevertheless, some GP facilitators reported that despite the sometimes large distances, their husbands or families supported them in their work and expressed a determination to carry out their duties regardless.

Low education standards

In remote areas where few rural women have more than a few years of schooling, GP Facilitators were selected with lower than the education criteria of 8 years of education and required considerably more handholding and mentoring. In future, a more systematic approach is needed to adapt the standard training packages and materials, supervision and support frameworks to the capability levels of lower educated facilitators. In effect, tailoring the scope of the design of the intervention for such areas, this also applies to particularly difficult operational contexts such as Left Wing Affected areas.

PLA games and picture cards

The quality, audience appeal and impact of the games and picture cards were reported by all stakeholders to be extremely high. These materials and the handbooks, training manuals and job aides are an important resource for the state and for communities, and there is high demand for the picture cards from ASHA and AWW to support their own work.

Training and support

Good training and support of facilitators is an essential pillar of effective PLA. The cascade and interval training system was well designed and a pragmatic response to the scale related challenges of the programme. Partnership with local NGOs to fill human resource gaps in the government structure and the involvement of SHG Federations to provide block level personnel for supervision and training were creative solutions to creating decentralised, block level training and supervision capacity. However, the funding bottlenecks experienced at the beginning of the cycle that resulted in large gaps in cascading the training down, and in the second half where residential training could not take place had a strong negative effect on training quality, the quality of facilitating meetings and mobilising communities, and the motivation of facilitators.

Monitoring and MIS

The intelligent use of online and offline MIS sought to overcome the challenges of monitoring a large scale community programme in remote areas with poor infrastructure and communication networks. Delays in data entry were however commonplace and the lack of a dedicated computer and office space at block level were significant barriers to an efficient MIS able to inform management in real time. The additional layer of field monitoring provided by Quality Managers positioned in each district raised implementation and reporting standards and highlights again the importance of field based supervision and support.

Funding and fund management

Management of Financial Assistance and Technical Assistance were both problematic areas for the programme that led to delays and undermined the motivation and interest of partners and the Shakti Varta field teams. Channelling funds through government and Technical Assistance agencies have their respective strengths and weaknesses. The complex funding arrangement of Shakti Varta where funds were channelled through different state level government entities for block level activities implemented by teams of government and non-government staff who were themselves funded via different channels, was indeed an ambitious one. The level of synchronisation of fund flows needed for a programme of Shakti Varta's scale and complex operational arrangements was not possible with the multiple funding flows and the inherent delays in transferring funds through the government system.

SHG Federations

Shakti Varta offered multiple benefits to Block level SHG Federations, helping to revive fledging organisations, building their capacity and in turn credibility with communities. SHG Federations have greater potential to contribute to the sustainability of Shakti Varta than pre-intervention, but this is a medium to long term goal that will require continuing technical and financial support to achieve.

8.2 Outcomes

The mixed methods evaluation design has the advantage of drawing on repeat cross-sectional household surveys implemented at baseline and early endline, repeat qualitative studies, as well as the programme's extensive MIS and process documentation. Some areas of investigation are for example better addressed via one or other of the data sources. For example the household survey data presents robust evidence of the level of change for specific indicators, while qualitative research and case stories provide insight into the processes of change. The design does not include a control site and findings indicate the contribution of the intervention to changes found.

Level of participation

The 2016 household survey found 20% of pregnant women and women with a child under five respectively, have participated in a Shakti Varta meeting, and that the frequency of attendance was generally low at 1-3 meetings. A further 15% of pregnant women and 22% of women with a child under five had ever heard of Shakti Varta meetings but had not attended. The household survey asked women that had 'ever heard of' Shakti Varta who informed them, of Shakti Varta, and found that neighbours were the main disseminator, followed by ASHAs and AWWs.

The MIS did not track individual's attendance at meetings due to the complexity of including this in the database. Qualitative research also found that women reported low attendance at meetings.

The barriers to participation documented through qualitative data and process documentation help to explain the low participation levels. First and foremost the livelihood demands on women and men make them unavailable for meetings during the day; in fact very few men

attended any meetings due to their daily labour. Women reported household chores as the second reason why they could not attend meetings. Unsuitable timing of the meeting was the next important barrier to participation with women stating a preference for evening meetings; timing also impeded participation by adolescent girls who were at school during the day. Women from far-flung hamlets were often not able to attend due to distance and the difficulty and time required to travel to Shakti Varta points. The added frequency of meetings in the latter half of the cycle further hindered participation with meetings requiring more of women's time.

The low attendance and the low frequency of attendance has implications for the extent to which the meetings can influence behaviours and build solidarity and support among women to empower them to support behaviour change. To some extent this may be offset by the diffusion of messages, which is discussed later. However, increasing participation and continuity of attendance does need further attention by programme managers, in particular to the potential for holding meetings in the afternoon and evening when more women would be available, although this could pose difficulties for the GP facilitators in terms of geographical movement.

Who participates in meetings?

The household survey found that out of the sample of pregnant women and women with a child under five interviewed, the proportion of Scheduled Tribe and Scheduled Caste women who reported to have attended Shakti Varta meetings was slightly lower than for other caste groups. However as women from Scheduled Tribes and Scheduled Castes represented around two thirds of the women interviewed the actual numbers of women who reported attending were highest from these groups. The MIS shows that 72% of participants are from Scheduled Tribe and Schedule Castes. The local recording by the GP Facilitator of participants at the meeting itself and the lack of incentive to encourage false reporting of participant's caste or tribal status suggest that the MIS data is relatively reliable on this point.

Frontline worker participation: The FLW survey and the MIS both show high levels of AWW and ASHA participation in Shakti Varta meetings. Qualitative data also shows that FLWs played a critical role in supporting GP Facilitators, mobilising women to attend meetings, explaining messages during meetings, and working with the facilitator to track target groups, including high risk pregnancy cases and advocate for their well-being with family members. Shakti Varta encouraged collaborative working of the three field based agents which helped AWWs and ASHAs in achieving their own work targets.

Diffusion

The qualitative study's quantitative tracking of the diffusion of Shakti Varta messages about behaviour change looked at diffusion from the perspective of the disseminator. It found that the disseminator of information frequently shared information. The most common persons she shared information with were family members (59%), neighbours (31%) and then friends (10%). Information was most often shared within the home and in the evening.

The findings on diffusion suggest that women who attend meetings are diffusing information as per the theory of change, but this is primarily remaining within the family home. Increasing the attendance of women at meetings from those households where there are no meeting

participants will therefore be important to spread the information to a larger share of households in the community.

Reported changes in knowledge and awareness related to pregnancy and infant and young child feeding (IYCF)

The household surveys from 2014 and 2016 show modest increases in the few indicators for which data is available on changes in knowledge and awareness related to pregnancy and IYCF. Data from Stories of Most Significant Change show how Shakti Varta has created space for women to share information on infant and child feeding, when previously such discussion was mostly confined to the home. Women reported to welcome the opening up of space for discussion, the new opportunity to share experiences, seek inputs from one another, clarify doubts and access to 'expert opinion'.

Reported changes in knowledge of handwashing

The household surveys show a significant improvement in FLWs knowledge of the five critical moments for handwashing, rising five-fold between 2014 and 2016.

Reported changes in maternal and child health practices

Among all pregnant women interviewed in the household surveys in 2014 and 2016 there was an increase in registration of pregnancies at AWCs, pregnant women receiving a take home ration from AWCs and pregnant women taking rest; the prevalence of pregnant women sleeping under bed nets reduced.

Pregnant women who attended Shakti Varta meetings reported changes in their practices including over 80% who reported to be taking more rest, 68% sleeping under a bed net, and 47% improving handwashing. Pregnant women who had only heard of Shakti Varta meetings but not attended reported similarly high levels of improved practices in the same areas. These findings suggest that attendance at Shakti Varta meetings and diffusion of messages from those meetings is contributing to improved behaviours among pregnant women.

Women with children under five who attended Shakti Varta meetings reported adopting improved newborn care practices with over 50% stating they put the baby to the breast within an hour of birth, and wiping, wrapping and delayed bathing of the newborn. Women with children under five who had ever heard of Shakti Varta meetings but not attended also reported improved practices with 49% reporting that they fed the baby colostrum.

Qualitative data illustrate the process through which participation in meetings is raising awareness and how Shakti Varta group participants, facilitators and FLWs are actively tracking target women to improve maternal health practices and advocate for them with family members. Although data is from a small number of examples, the case story material illustrate how the Shakti Varta platform is nurturing bonds between women, and the active role that facilitators and FLWs are taking to promote better pregnancy outcomes.

Reported changes in hygiene and sanitation practices

Mothers of children under five reported increased hand washing at critical moments and increased safe disposal of their own and their children's faeces between 2014 and 2016. There was no similar improvement in adolescent girl's handwashing and sanitation practices. This coincides with similar findings in the CLS evaluation²⁶, and the very low attendance of adolescents in Shakti Varta meetings.

FLW use of an appropriate cleansing agent during handwashing improved from 80% in 2014 to 99% in 2016. FLW disposal of their own faces between the two surveys did not however change.

Qualitative data from Shakti Varta participants strongly asserts that Shakti Varta has increased awareness of the harm of open defecation, changed community understanding about the benefits of using toilets, stimulated many people to start building toilets and for those who had toilets, to start using them. The 2016 survey of FLWs also found that close to a third of FLWs reported that Shakti Varta raised awareness of building toilets.

The combined data suggests that Shakti Varta is contributing to the increasing awareness and practice of better handwashing and safer sanitation.

Reported changes in community action

The 2016 household survey found that among those women that had attended a Shakti Varta meeting, some 48% had been involved in some form of community activity after attending a meeting. This high level of community activity corresponds to the findings from qualitative and process documentation that shows how participation in meetings is building women's confidence to ignite and participate in mobilising communities behind social and HNWASH agendas.

Reported changes in women's empowerment

Household survey data found little change in indicators related to women's decision-making authority in the home, but improvement in women's decision making over personal issues and in the perception that women like them can change things in their community.

Qualitative data shows the process through which Shakti Varta is building women's confidence to express their opinions, take part in family discussions and village meetings. Case stories also show how GP Facilitators have gained confidence and status through their work, increased their influence in their homes and communities and are taking on leadership roles. Empowering rural Odishan women is a long term process being addressed through many development programmes including Mission Shakti and improving human development outcomes in the State. Shakti Varta appears to be contributing to this process of change not least through building the capacity and influence of almost 6000 community based facilitators trained to

²⁶ Odisha Technical and Management Support Team. (2016). Evaluation Report of Community Led Sanitation in Odisha. Options Consultancy Services LTD, IPE Global, CARE India.

promote HNWASH messages and mobilise women and the community to support behaviour change.

8.3 Value for money

Shakti Varta is an economical intervention and a cost-efficient behaviour change communication intervention in comparison to Government of India norms for BCC. Assuming a person who attends a Shakti Varta meeting disseminates messages to four or more other persons, the cost per person of raising awareness is INR 5 (£0.05). In comparison, the Government of India norm for BCC activities under the National Rural Health Mission/National Health Mission is INR 10 (£0.1) per person. Evidence of effectiveness and sustainability are not feasible at this early stage of evaluation.

8.4 Conclusion

The mixed results from this immediate post intervention evaluation reflect the challenges of implementing a large scale community mobilisation programme embedded into government systems and structures and the creative solutions that were implemented to fill related gaps and capacities. Delays in fund flow were the most critical bottleneck that undermined implementation progress and quality. Going forward, as the government plans to complete the PLA cycle in Wave II districts and sustain the gains from Shakti Varta, streamlining the flow of funds through the government system needs priority attention. Delays in the flow of funds need to be resolved to avoid delays in implementation, the resultant demotivation of field teams and loss of momentum and quality of community interactions.

Two important and possibly interrelated lessons have been that the time span between meetings was too short during the second half of the PLA cycle, and that the number of target women attending meetings needs increasing to expand reach. Monthly meetings as common in the PLA trials seems to be a more realistic time period given the livelihood and daily pressures on women's time. Changing the timing of meetings and in some areas the locations will likely be necessary to increase attendance especially of women living in far-flung areas. Tailored approaches for challenging operational contexts such as Left Wing Affected areas and remote pockets also need to be considered.

Following the theory of change we find that pregnant women and women with children under five that participated in meetings report improvements in pregnancy and newborn care practices, and improved handwashing, and this is also reported from similar target group women that had heard about meetings but not participated. Evidence suggests that Shakti Varta is contributing to improved awareness of and practice of safer sanitation. There is also evidence that participation contributes to community action and the building of women's agency and self-confidence. Shakti Varta has actively engaged AWWs and ASHAs in the community mobilisation process and fostered collaborative working between them and GP Facilitators. It has also strengthened the capacity of Block level SHG Federations. These are indications that at this early stage of evaluation, the theory of change is robust. These are indications that at this early stage of evaluation, the theory of change is robust. Later evaluation to capture the results of Wave II and changes in the primary outcome of neonatal mortality is recommended.

The evaluation documents the challenges and feasibility of taking PLA to scale through government and community systems and structures, and the trade-off between a narrow versus broader focused PLA cycle. Government of Odisha has committed to completing the cycle of meetings in Wave II after DFID financial and technical support has closed. This will require commitment to sustain the core supporting systems of cascade and interval training, regular field supervision and support at the block level, field monitoring and the MIS. Reduced investment in any of these core areas will reduce the quality of implementation and the potential outcomes.

ANNEX 1. ROLES AND RESPONSIBILITIES OF ACTORS RESPONSIBLE FOR THE IMPLEMENTATION OF MIS

State Monitoring Team (TMST & State Technical Agency):

The State Monitoring Team played a crucial role in designing, developing and implementing the MIS tool. The State Monitoring Team had the following responsibilities:

- Designing and developing the MIS tools
- Validating the accuracy of the system with pre-testing
- Imparting training to the district and block team
- Monitoring the monthly MIS Report and preparing strategies for error-free effective implementation and mid-course corrections of Shakti Varta programme

Software/IT Team:

As MIS was a computer- and web-based tool, it was important to keep the IT team involved at all stages of implementation of both the online and offline MIS. The Quality Managers (QMs), along with the STA, were trained to deliver this responsibility and the STA employed software/IT experts to fine tune the design and development of the MIS. These experts were charged with the task of:

- Designing and developing the software for both online and offline MIS
- Uploading the MIS data obtained from all districts on a monthly basis
- Training and orienting all the QMs on MIS installation and data entry

State Project Coordinator (Monitoring):

The State Project Coordinator (Monitoring) was assigned at the state level to plan and monitor operationalisation of the MIS, implement training on MIS, and ensure successful installation of MIS tool.

The State Coordinator was given the following responsibilities:

- Ensuring that both offline and online MIS were maintained and managed and reports were generated
- Interpreting and analysing data that was being generated through MIS and preparing analytical reports at the end of every month to be submitted to TMST and DWCD for action. Imparting training at district level.

District SHG-PLA Coordinator:

SHG-PLA Coordinators were responsible for coordination of all block-level activities such as data entry, collation and compilation, in their respective districts. Their role involved:

- Preparation and submission of MIS data in coordination with the district NGO and CDPO to the STA on time
- Submitting the monthly Shakti Varta MIS reports (with completed data entry status) on meetings held for the month

Block Finance and Operation Officer (F&O):

The F&O Officer was responsible for:

- Submitting a monthly Shakti Varta GP Facilitator payment report in the MIS with 100% payment status on meetings held for the month

Quality Manager:

The Quality Manager (QM) was the key person responsible for validating, installing and executing the MIS software and tools at the district and block level. They were responsible for delivering the following at the district-level:

- Training and orienting all the Block Finance Coordinators (BFCs), with support from the State Monitoring Team, on MIS data entry
- Verifying the code uploaded in MIS offline along with all other district team members
- Validating the accuracy of the software design and corroborate it during the initial phase of data entry
- Installing MIS offline software in all the blocks of an assigned district.
- Participating and providing support in MIS training and the Shakti Varta Resource Centre (SVRC)
- Ensuring timely collection and reporting of MIS data as designed under the programme
- Presenting and discussing the monthly MIS data at the Block Coordinator and Block Finance Coordinator review meetings and addressing the gaps and bottlenecks.

Block Coordinator (BC):

As the offline MIS data-entry software was installed at the block level and data was presented at same level, the Block Coordinators had a critical role to play in ensuring correct, timely and accurate data. Their major responsibilities were:

- Collecting and compiling MIS data from GP Facilitators and submit it to the Block Finance Coordinator for data entry within the stipulated time frame
- Compilation and analysis of data submitted by GP Facilitators on a monthly basis; specifically, tracking and recording progress of meetings and attendance of participants.

Block Finance Coordinator (BFC):

The BFC had the following responsibilities:

- Verifying the village registers submitted by GP Facilitators and compiling data sheets taken from the village registers and submitted by Block Coordinator
- Entering data in the MIS software at block level

GP Facilitator:

The GP Facilitators provided the information from their village registers for the MIS. Their responsibility was to:

- Complete the village register and submit data to the Block Coordinator through Format
- Submit the meeting report, duly signed by AWW/ASHA/GKS.

ANNEX 2. SHAKTI VARTA QUALITATIVE RESEARCH QUESTIONS

Areas of Enquiry	Research Questions
Governance and Institutionalisation	<ol style="list-style-type: none"> 1. What have been the benefits to the government system of implementing Shakti Varta? 2. How have Shakti Varta methodologies and operational practices and resources strengthened government systems including HR, training, planning, supervision and monitoring, convergence with other government departments, partnerships with CSOs? 3. What are the challenges that civil society including SHGs and federations faced in participating in the programme, and what are the benefits they perceived? 4. What were the constraints and enabling factors to the government system in planning, rolling out and monitoring the PLA intervention and mobilizing and supporting the engagement of SHGs and SHG Federations for PLA? How did this vary by district and block context? 5. How efficient has been the fund flow and financial management of PLA intervention? What have been the shortcomings and lessons for improvement? How has this varied by district and block context? 6. Were training / capacity building programmes undertaken according to plan and quality at different levels, what were the challenges and enabling factors, and the learning to be gained from this experience? 7. Was the institutional and implementation arrangement appropriate? Were there difficulties and what were the factors that enabled implementation in better performing areas. 8. What was the coverage (from MIS data) and pace of PLA implementation (from MIS)? What were the challenges and reasons for slower roll-out than planned? 9. Were Mission Shakti and Block Federations able to absorb the program; what gains have accrued to them.
Equity and Extent of Participation	<ol style="list-style-type: none"> 1. Who participated in the PLA meeting (SHGs and its members; non group members, adolescent girls, pregnant women, mothers, men, people from tag villages/hamlets, poor and excluded, frontline service providers) and what was the quality of their participation in group meetings? 2. Was the participation of people socially inclusive and equitable? 3. What are the social-norms around participation in Shakti Varta meeting and how that have influenced? 4. How were men and mothers-in-law involved in the intervention and to what benefit and affect? 5. What were the enabling factors and barriers for ensuring participation in PLA meeting? 6. Did the PLA process build cohesion among different population groups, how, and if not, why not? 7. Was any behaviour change modification seen? If so, whose behaviour was perceived to have changed and how and why, who was perceived to have gained entitlements and how (e.g. toilet subsidies), 8. Was the confidence of participants to participate in and initiate social change processes built through participating in PLA? Whose confidence was reported to have been built and how? 9. What is men's perception of how participating in the PLA meetings has affected women and their agency and self-confidence.
Diffusion of PLA	<ol style="list-style-type: none"> 1. Were PLA messages and motivation for change diffused through the women's

Areas of Enquiry	Research Questions
Messages and enabling behaviour change	<p>group participants to the wider community? If yes, what were the mechanisms by which this happened?</p> <ol style="list-style-type: none"> 2. Were any new messages / information received by those who participated and did not participate in PLA? 3. Has PLA helped to disseminate and diffuse messages to different sections of community? Were any groups left out and why? 4. What were the enabling factors and bottlenecks for diffusion of messages? 5. How did the process of communication and dissemination of information stimulate community action, family behaviour change and attitudes and practices of people including violence against women (VAW). 6. How much of the aspects/concepts and messages that were delivered by the Shakti Varta meetings have been retained with the direct participants / captive audience community members (CACM). How much of the social & behavioural stimulants and key messages retained? 7. Whether the messages have resulted in appropriate personal action in terms of service utilization, which topics were relevant and why etc. 8. Did the direct participants tell about the learning and messages from SV to others in their family or friends / peers in village. Why did they think of telling them etc. or what made them discuss or tell these aspects? 9. From the indirect audience – what messages they got from direct participants, how much of it they found it useful and why, how did they use it, how did these add values to their lives, will they discussed or spread these learning to more people and why?
Effect of PLA (including disaggregation by those who did and did not participate in PLA meetings)	<ol style="list-style-type: none"> 1. What do different sections of the community, frontline workers, and institutional actors believe were the most significant changes brought about by the intervention, if any 2. Do key stakeholders attribute any changes to PLA and what led to them? 3. Were there any behaviours or practices that could not change or were slow to change and why? 4. Was there any change observed in access to and demand for services and health seeking behaviour which can be linked or attributed to PLA? 5. Has PLA helped to attain equity of access, and strengthen solidarity and cohesiveness among the community? 6. Has PLA affected the responsiveness of frontline workers and how? 7. What was the impact on SHG federations, have they been capacitated and how? 8. What are the social-norms affecting the change process expected under Shakti Varta? 9. Has PLA increased women’s sense of empowerment and agency and how?
Synergy	<ol style="list-style-type: none"> 1. Was there synergy between PLA and other community interventions such as Village Health Nutrition Day (VHND), Immunization Day, Jaanch Committee, Mothers’ Committee, Gaon Kalyan Samiti (GKS), etc.? Has the synergy produced positive benefits for users and providers, and what have been key enabling factors? 2. How were FLWs affected by the program, do they consider it a positive contribution to their work or not, why? 3. Has the PLA intervention been integrated within the institutional structure of the government system at state, district, block, GP and village level? Has this contributed to implementation synergies and support for government staff across the three nodal sectors, and especially for FLWs? 4. How have PLA and Community Led Sanitation (CLS) been integrated to mobilise the community to attain Open Defecation Free (ODF) villages? Have there been any gaps, and how could this be improved in future?

Areas of Enquiry	Research Questions
	<ol style="list-style-type: none"> 5. Were the village SHG and Block SHG Federation able to absorb the integration of PLA and CLS? If not, why not?
Scalability	<ol style="list-style-type: none"> 1. Can PLA be taken to large scale through government structures? 2. What are the necessary enabling factors to support government structures and systems? 3. What is the impact of different geographical, social, and institutional capacity contexts on performance and results? 4. Are there some contexts in which it is not possible to implement Shakti Varta with good effect? 5. What is the cost-effectiveness of Shakti Varta (to be answered via the cost-effectiveness study) 6. Are there some contexts where Shakti Varta is not a cost-effective approach (to be answered via the cost-effectiveness study)