

Convergence of Community mobilization, planning and Service delivery for better Early Childhood Development (ECD) outcomes:

Evidences from an experimental study in two Tribal Blocks in Madhya Pradesh, India

Abstract

Bachpan: Move towards a “Happy Healthy Learning Child”

This study evaluates the impact of a pilot aimed at engendering bottom up planning through community participation and establishing convergence of provisions for children across health, nutrition and education sectors to address development needs of the life cycle continuum of 0-11+ year olds. The evaluation is carried out in a quasi-randomized control trial design, with the experiment conducted in 220 villages in a tribal block in Madhya Pradesh, Central India. An intervention facilitated by an NGO aimed to mobilize village community and service providers of health, nutrition and education services in the villages around Village Resource Groups (VRG) to prepare village plans for child development. The analysis shows that these interventions had not only facilitated increased awareness about child development needs, but also improved ante-natal care practice for pregnant women, reduced child malnourishments, improved school readiness and increased average test scores of children attending primary schools. Thus, three years into the interventions, an analysis of impact of the intervention shows that gains in child development indicators of treatment groups were significantly better than that of control group.

The pilot project “Bachpan” was an outcome of the Madhya Pradesh (MP) government’s willingness to pilot community driven convergent planning and service delivery for child development, based on the recommendations of the World Bank report “Reaching Out to the Child” (2004). The World Bank supported the pilot by (a) engaging Naandi Foundation, an NGO, to work with the community and (b) by designing a rigorous evaluation of the program and implementing it. The evaluation consisted of base line and end line surveys conducted in pre-selected control and experimental groups, enabling a comparison of the changes in both groups in a quasi-experimental design. This evaluation was complemented by a series of quarterly process documentation. Bajna (the Community Development block with 220 villages where interventions were introduced) and Sailana (the Community Development block with 210 villages where no intervention under the project was introduced) were tribal blocks in Ratlam district of MP, with similar socio-economic, geographic and ethnographic profiles, and where no non-governmental or private interventions existed. The project consisted of a basket of interventions, mainly aimed at improving community awareness around issues related to child development, community mobilization and creation of Village Resource Groups (VRG), involving service providers, and preparation of village plans for child development that fed into the district plans of Integrated Child Development Services (ICDS), Reproductive and Child Health (RCH) and *Sarva Shiksha Abhiyan* (SSA – the program for universalizing elementary education), three Centrally Sponsored Schemes (CSS) that provide nutrition, health and education services that benefit children at different stages of development.

The impact of the project was assessed in terms of a set of child development outcomes and processes of service delivery and community behavior / knowledge. The child development outcomes included

those relating to health, nutrition and education related indicators for children at different stages of development.

The outcomes of this pilot needs be analyzed in the context of changes that happened in both control and experimental blocks. Villages in both blocks were remote when the baseline survey happened in 2005-06, with hardly any road connection. This situation had changed in the years thereafter, and hence, the access to services. However, the impact of the intervention could be gauged in terms of the magnitude of change in outcomes /processes between the control and intervention villages.

At baseline, the outcomes of Bajna, the pilot block and Sailana, the control block, were more or less similar, or at least without any significant differences. The analysis shows that three years after the base line survey, the child related outcomes improved in both Bajna and Sailana, but the improvements were remarkably better in Bajna, the project area. In the first sub-stage of child development, indicators related to pregnant women receiving full ante-natal checkups (ANCs), the number of ANCs, availing of different components of ANCs, intake of iron folic acids (IFA), vaccination related to tetanus, institutional delivery assisted by trained health professionals - all registered improvements in Bajna and Sailana, and the outcomes in absolute terms were better in Sailana on many indicators, but the improvements from base line survey to end line survey were more significant in Bajna compared to Sailana, especially in terms of magnitude, attributable to the project interventions in the absence no significant changes in the household characteristics and socio-economic developments of the region. Child development indicators related to immunization, weight for age or child's social development for all stages of development – be it infant stage (0-12 months), or 12-24 months, or 2+ 5 years, the magnitude of improvements in Bajna were more than that of the comparison block, Sailana. School readiness of five year olds as well as learning outcomes of children in Grade II, both in terms of Language and arithmetical skills, also improved significantly in Bajna compared to Sailana. Clearly, the analysis shows that interventions targeted at informing community and empowering them for a convergent, bottom up planning and service delivery can contribute to the improvement of child related outcomes.

| Summary of Outcomes: "Difference in difference" between treatment and comparison blocks | | |
|---|---|--|
| Indicators on Outcome for various stages | | Changes in treatment – changes in control (Coefficient) |
| Sub-stage 1 | Percentage of pregnant women who received full ante-natal check-up | 0.0346** |
| | Percentage pregnant women regularly received Supplementary food | 0.0980*** |
| | Percentage of deliveries assisted by institutionally trained | 0.358*** |
| | Percentage of children underweight | -0.129** |
| Sub-stage 2 | Percentage of children fully immunized by year 1 | 0.292*** |
| | Percentage of children who have completed all prophylaxis Vitamin A | 0.2439*** |
| | Percentage of children below appropriate weight for age | -0.0738*** |
| Sub-stage 3/4 | Percentage of children entering in Grade 1 who have an adequate vocabulary in the school language | 3.267*** |
| | Percentage of Grade I children who have attended pre-school program | 0.472*** |
| | Achievement levels in language and Mathematics in Grade II | 4.56*** |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | |

Lessons

- Contextualization of interventions is important for improving processes and outcomes
- Convergence or coordination in planning and implementation is key to improving outcomes
- Convergence and coordination is important because there is no single solution to child development problems, and hence there is a need for basket of interventions, but these interventions needs to be complementary to one another.
- Community participation is key to better implementation and results, and community's participation is ensured when there is enough awareness and empowerment. For that to take place, it is important to create "change agents" or catalysts, and this require involving civil society organizations.
- For any intervention in development sector to show results, a critical minimum gestation period is required. This pilot shows it is important to provide that period before final evaluation so that the initial enthusiasm of a pilot dies down and actual results are visible.

Convergence of Community mobilization, planning and Service delivery for better Early Childhood Development (ECD) outcomes:

Evidences from an experimental study in two Tribal Blocks in Madhya Pradesh, India

Introduction

Every child deserves to have a “happy, healthy and learning” childhood, which facilitates her/his growth physically, socially, emotionally, intellectually and educationally. For any nation, developing human capability and hence human capital is vital for economic growth and social development, and every *paise* invested in a child is an investment in future.

However, despite several significant policy endorsements and substantial investments through programmatic provisions that aimed at improving child health, nutrition and education for nearly six decades since independence, the status of Indian child is far from satisfactory - rather dismal. Worse, even the benefits accrued so far have not been penetrated equitably, thus leaving out a large section of children, especially those from marginalized groups and far-flung areas in grim settings –like those from low socio-economic backgrounds and tribal societies. The World Bank (2004) report “Reaching Out to the Child” tried to address some of the questions as to why the programs were not delivering what it was intended and what could be the ways to give our children a better start. The report identified some factors as responsible for the limited impact of existing provisions which include:

- A fragmented, sectoral approach in implementing the schemes, which does not capture the synergies across sectors;
- Over centralized and standardized program designs which do not address contextual diversities;
- Inadequate finances and inefficient implantation;
- Inadequate monitoring capacity; and
- Low accountability and issues of service delivery.

Further, the World Bank study emphasized the need for an *integrated and life cycle approach to child development, including basic education*. This is based on an understanding of the interdependence of various outcomes during the stages of a child’s development. The physical, intellectual, emotional and educational developments that fundamentally shape the personality of any individual are not only inter-related but also take shape in a cumulative manner between the 0-11 years of age. Children who lag behind in these early crucial years are likely to lag behind later in life both economically and socially. The study also highlighted the need for an informed community coming together around child development issues and planning in a more convergent manner.

Thus, the study suggested that a community driven convergent planning for children (from pre-natal to 11 years) with a holistic and multi sectoral approach, which require a move towards a decentralized and cross-sectoral approach to planning and monitoring of programs, so that even with sectoral implementation better coordination can be ensured. Right now, though community driven, decentralized, bottom up planning is envisaged in many social sector programs like that in education (*Sarva Shiksha Abhiyan*) and health programs (National Rural Health Mission), in reality, this has not happened due to a variety of factors. It is in this context that the concept of “Village Plans for Children” was suggested as the basis for planning, implementing and monitoring the programs for children. The idea of preparing “Village Plans for Children” was envisaged as more than a mere tool for allocation of funds, rather, it is a platform for a bottom up approach for involving participatory planning by each village community for its children to ensure that it is context specific and need based and it is in

accordance with a multi-sectoral approach which addresses needs of the “Whole Child” and not of health, nutrition and education in silos.

From a Concept to a Pilot - evolving “Bachpan”: The idea to pilot the concept of “Village Plans for Children for their holistic development” came from the Government of Madhya Pradesh (GoMP), who felt that this could be one of the feasible ways to address the issues of child development in the state, especially to address the issues of service delivery and community awareness and mobilization at grassroots levels. At the invitation of GoMP, the World Bank decided to facilitate the process in the state through a pilot, to be evaluated rigorously for its impact. Bajna, one of the tribal Community Development blocks in Ratlam district with around 220 villages, was chosen (the method of selection of block is explained in Annex 1) as the administrative unit to implement the pilot. Naandi Foundation, a renowned Non-Governmental Organization (NGO) was assigned the responsibility of implementing, rather facilitating the interventions related to convergent and decentralized village level planning. The intervention under the pilot was titled “*Bachpan*” (see Annex 4, the process documentation report by Education Resource Unit for details) and has been in place for almost 3 years since 2006. The mission, vision and the objectives of the pilot are described in box 1 below.

Box 1

BACHPAN: The Child development Project

Vision Happy, healthy, learning child

Mission Facilitate integrated child development through convergent community and government action

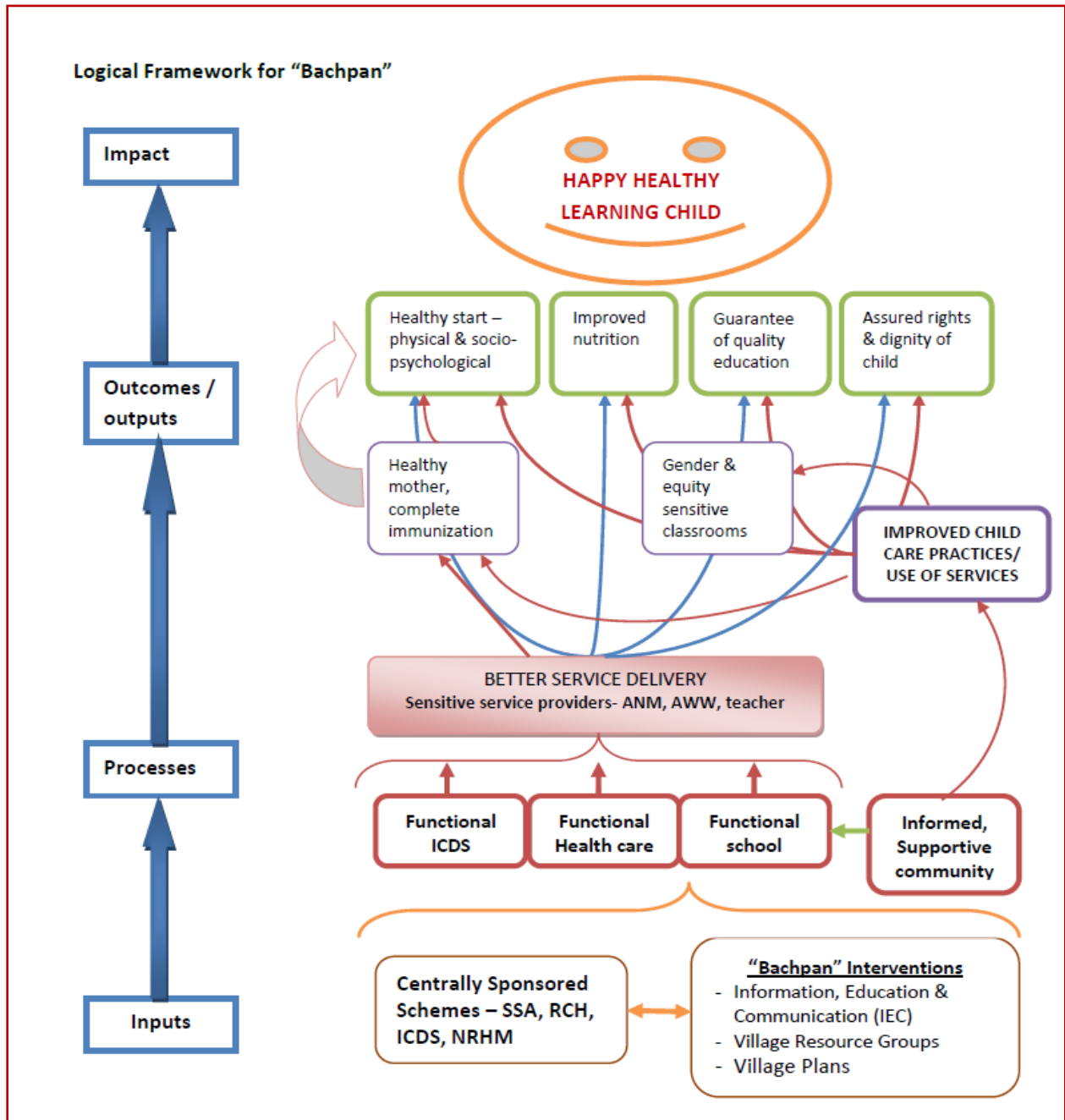
Objectives

- Create awareness on child development with a focus on the girl child
- Strengthen linkages between different service providers
- Strengthen linkages between the community, panchayat and service Providers
- Facilitate formation of Ekta Samuhs at village level (Village Resource Group) with representatives of the community, panchayat and service providers
- Develop integrated village level action plans around the needs of the child
- Advocate and lobby with local, district and state administration for flexible allocation of resources

This evaluation summarizes the results of the project impact till mid- 2009, to ensure that the time required going through the natural paths of conceiving to allowing for its initial influence is allowed for before evaluation was carried out. Since the idea of pilot was informing community to empowering and mobilizing them, along with service providers to plan in a convergent manner the plans for child development, it was felt that singular interventions, as experimented in many randomized evaluations (see for example, the impact evaluation studies by Banerjee et al, 2006; Pandey, P, S. Goyal and V. Sundararaman, 2009) may not lead to the desired results. It was decided that a basket of integrated and inter-connected interventions may lead to the desired results in a pilot like Bachpan. The activities focused on preparation of ‘Village plans for children’ based on micro-planning with participation of all stakeholders including beneficiaries and service providers and facilitated by the NGO. The NGO’s role was to facilitate the process through formation, training and capacity building of village resource groups for multi-sectoral planning for children through: micro-planning and need assessment, Information, Education and Communication (IEC) to the community and service providers, coordinated surveys and development of a unified multi-sectoral data system for planning, targeting of the community below

poverty line and monitoring, and beneficiaries' involvement in management of services etc. The logical framework of how interventions under Bachpan could make a difference to child related outcomes is depicted in Chart 1.

Chart 1



It was hypothesized that micro-planning along with these other interventions will lead to enhanced client power and more enabled service providers, which in turn would lead to improved service delivery. This will logically result in better targeting and utilization of funds and positive impact on outcomes. As agreed between the World Bank and the GOMP, an impact evaluation design of the control and experimental nature, with baseline at the beginning of the pilot and an end line survey after three years

of intervention was built into the pilot, so that a comparison between the baseline and end line results /indicators in the villages of the experimental block as well as that of the control block, could be made.

Evaluation of Outcomes and processes

This paper assesses the impact of the intervention carried out in around 220 villages in a tribal block, Bajna, of Ratlam district, Madhya Pradesh. The neighboring tribal block, Sailana, with similar socio-economic, geographic and ethnographic profile was selected as the comparison or control block. The methodology and logic behind the evaluation design is described in Annex 1.

This paper reports the analysis of early child development related outcomes for each stage of child development, and while presenting the outcomes, the overall progress in service delivery and the changes in knowledge, perception and practices of both providers and households. The child development related outputs / outcomes are analyzed and presented according to the different stages of child development; section 1 deals with pregnant women and zero to one year old children; section 2 deals with one year to two years old children; section 3 covers issues related to children between 2-5 years of age; and in section 4, issues related to children in the school going age group are explained.

As in the case of any quasi-experimental design, the differences / improvements in outcomes of experimental group from pre-project (baseline) to post-interventions (end line survey) is compared with that of the comparison group, using a “difference –in-difference” (or the net gains) approach to understand whether the interventions really mattered in improving outcomes.

Child development Outputs / Outcomes

The details of the sampling and survey are given in Annex 1. A description of the socio-economic and geographic profile of the regions under study is provided in Annex 2. Annex 4 provides the details of the pilot “Bachpan” and the activities undertaken under the project in 220 villages in Bajna.

The outcome indicators that were tracked during the baseline and end line survey are given in table 1 below.

| Table 1. Indicators on Outcome for various stages | |
|--|--|
| Sub-stage 1 : <i>Improved monitoring of growth and development of children and health of pregnant women</i> | Percentage of pregnant women who received full ante-natal check-up |
| | Percentage pregnant women regularly received Supplementary food |
| | Percentage of deliveries assisted by institutionally trained |
| | Percentage of children not underweight |
| Sub-stage 2 : <i>Improved rates of immunization by end of year 1; Completion of all prophylaxis of Vit A; Average daily time spent on adult-child interaction in families</i> | Percentage of mothers of children under one year who have provided six months exclusive breast-feeding |
| | Percentage of children fully immunized by year 1 |
| | Percentage of children who have completed all prophylaxis Vitamin A |
| | Percentage of children with appropriate weight for age |
| | Average daily time spend on adult-child interaction in the family |
| Sub-stage 3/4 <i>Quality of early childhood education; Teacher and student attendance; Rates of drop out and transition; Achievement levels in grade 2</i> | Percentage of children entering in Grade 1 who have an adequate vocabulary in the school language |
| | Percentage of Grade I children who have attended pre-school program |
| | Percentage of Teacher and student attendance |
| | Rate of drop out and transition to next stage |
| | Achievement levels in language and Mathematics in Grade II |
| | Percentage of 6-11 year old children completing primary education |

Sub-Stage 1: Improved monitoring of growth and development of children and health of pregnant women

In this sub-stage, the main concerns are about the health of the pregnant women and the initial growth of infants.

1.A Did pregnant woman and her households prepare themselves enough to embrace a healthy responsive newborn?

How the woman (and her family) prepares herself during pregnancy matters tremendously for ensuring healthy newborns. Health care during pregnancy – labeled “Antenatal Care” (ANC) is vital for child development in the first few months. ANC is a complex mix of services ranging from advice on recommended diet, monitoring and recording bodily changes to counseling on precautions to be taken during pregnancy. The aim is to identify, prevent and possibly treat conditions that can endanger the life of the mother and the fetus. Usually, the doctor or health worker provides ANC. Timely checkup and adequate number of check up are essential for properly monitoring pregnancy. A basic but complete schedule of ANC includes a (a) minimum of three ante-natal care visits, (b) prescribed dosage of iron and folic acid intake and (c) vaccination against tetanus.

(a) ANC Check ups

The information on ANC was collected from mothers of children in 0-12 month’s age group, during their pregnancy. Here we mainly looked at the following indicators: (i) whether the pregnant women availed any (or at least one) ANC; (ii) whether the pregnant women availed full ANC; (iii) whether the pregnant women availed ANC during the first trimester itself; (iv) whether the pregnant women received various components of ANC checkups; (v) number of ANC visits on an average the pregnant women had; and (vi) whether the pregnant women received some post-ANC feedback and support.

- **Any ANC:** The first indicator we looked at was whether the mother had “any ANC” during her pregnancy stage. ‘Any ANC’ is a minimal measure, as it would consider pregnant women who at least had one antenatal visit. The baseline survey results shows that in 2005-06, around 25% of the mothers in Bajna and 20% of mothers in Sailana *did not avail* any ANC during their pregnancy. The figures for “any ANC” in these two blocks are comparable to the MP state average figures available from NFHS III (77% in rural MP in 2005-06). The end line survey results show that by 2009, almost 98% of all mothers reported having at least one ANC check up during their pregnancy. An analysis using “difference–in–difference” approach shows that the improvements in ANC were more prominent in Bajna, though the improvements were not significant enough to be statistically better than what happened in Sailana.
- **Full ANC:** Another related indicator is related to receiving “Full ANC” that includes a minimum of 3 ANC visits. In 2005-06, only 8% of the mothers had received full ANC in Bajna as compared to 23% in Sailana. As per the NFHS III round survey of 2005-06, in rural MP, more than 34.6% of mothers had at least 3 antenatal visits during their last birth. An analysis of end line survey shows that 24% of mothers in Bajna and 32% mothers in Sailana received full ANC treatment. The analysis of the improvements in the availing of full ANC check up, the comparison between the two blocks from baseline to end line survey shows that Bajna’s improvements were better than that of Sailana (significant at 0.01% level).
- **First ANC:** As per the baseline survey of 2005-06, in Bajna, 12% of pregnant women had their first ANC during the first trimester, while in Sailana, 21% of women availed their ANC during the first trimester itself. Around 49% of women in Bajna and 56% of women in Sailana had their first ANC

check up during the second trimester. Thus, around 61% of women in Bajna and 77% of women in Sailana had their first ANC visit during the first two trimesters three years ago. The end line survey shows tremendous improvements in the first ANC visits during the first trimester itself. 57% in Bajna and 87% Sailana had their first ANC during the first trimester itself. A comparative analysis of the indicator “time of first ANC visit by pregnant women” of the two blocks shows that the improvements were significantly better in Sailana, a block with no intervention. However, a comparison of “whether the mothers received their first ANC check up within the first two trimesters” shows that there was no significant difference between the two blocks.

- **Various components of ANC:** The analysis considered various components of ANC. Of those who received “any ANC”, weight and height measurements, blood pressure and blood checking were the components provided most often. A comparison of these various components is given in table 1.
- **Mean number of ANC visits:** On an average, the pregnant women in Bajna had less than 2 ANC check ups in 2005-06, which has now improved to 2 (end line survey, 2009), while the number of ANV checkups availed by pregnant women in Sailana has remained 2 during the baseline and end line surveys.
- **Feedback and follow up action post ANC:** What is most important is not only having ANC visits, but receiving the right set of feedback. The base line survey shows that only 33% of pregnant women in Bajna and 36% in Sailana received any feedback after their ANC. However, the end line survey shows that this had tremendously improved, with 85% of pregnant women in Bajna and 71% in Sailana reporting feedback received post ANC. The improvements in Bajna were significantly larger than the improvements in Sailana. Any follow up action post ANC was also improved significantly in Bajna compared to Sailana during 2005-06 to 2009.

(b) Iron and Folic Acid Intake (IFA)

Since most of the women in the area are generally undernourished, it is important that they have sufficient nutritional intake, generally in the form of iron and folic acid (IFA) tablets. The baseline survey shows that around 72% of the women in Bajna and 79% of women in Sailana had received IFA tablets during their pregnancy. However, it was not easy to find out whether they consumed these for 90 days or more when they were pregnant – most of the mothers could not recall anything related to that. Our end line survey reveals that the intake of IFA by pregnant women had improved, and 97% of women in Bajna and 88% in Sailana took IFA tablets. The analysis shows that the improvement in Bajna was significantly better than that in Sailana. It also revealed that the intake of IFA was also significantly higher among mothers with full ANC. All mothers who had followed ‘full ANC’ cycle received supplementary nutritional intake during their pregnancy, compared to only 70% (baseline survey) and 77% (end line survey) of those who had not used ANC facilities in full cycle. This meant that a majority of mothers (75%) who had ‘no ANC’ checkups were left out from the receiving supplementary nutrition intake during their pregnancy. Clearly, the role of ANC checkups for identifying the nutritional deficiency and taking remedial measures on the part of mothers is coming out from these results in Bajna and Sailana.

© Vaccination against tetanus

Neonatal tetanus is a very common cause of death among neonates. It is common among children who are delivered in unhygienic environments and when un-sterilized instruments are used to cut the umbilical cords. Hence it is very important that in areas where there is a dearth of adequate health care, at least the mother is vaccinated against tetanus to prevent the likelihood of neonatal tetanus. An analysis of base line and end line survey results show that in the block where “Bachpan” was

implemented, the improvements were significantly better than that in the control block. Similar to the case of IFA tablets intake, those mothers who had full ANC also had TT vaccines during their ANC visits, while those with no ANC were mostly left out.

The overall analysis shows that in most aspects of pre-natal care, both control (Sailana) and experimental / intervention (Bajna) blocks showed improvements over a 3 year period, but in Bajna, the improvements were statistically better than that of Sailana. The results show that with interventions, the gains in full ANC checkups in Bajna were 3.4% better than the gains in Sailana, the comparison block with no project specific interventions. Similarly, the gains in Bajna with respect to IFA intake and TT vaccine of mothers between baseline and end line survey period were 9.8% and 10% better than the gains in Sailana.

The analysis of the baseline and end line results for Bajna and Sailana and the “difference-in-difference” results for ANC check up, IFA intake and tetanus vaccinations are provided in table 2. The “difference-in-difference” indicates the differences between the changes in treatment and changes in control.

| Table 2. Results for improvements in Antenatal Care (ANC) | | | | | |
|---|------------------------|----------------|------------------------|----------------|----------------------------|
| | Baseline Survey | | End line survey | | Diff- in difference |
| | Bajna | Sailana | Bajna | Sailana | Coef. |
| Did not receive / availed any ANC | 24.9 | 19.8 | 1.3 | 0.4 | -0.003 |
| Availed at least one ANC | 75.1 | 80.2 | 98.7 | 99.5 | 0.033 |
| Availed Full ANC | 8.9 | 23.8 | 24.4 | 32.5 | 0.0346** |
| Had received some Feedback post ANC | 32.57 | 36.3 | 84.6 | 70.5 | 0.114*** |
| Had some follow up action on ANC | 21.2 | 35.39 | 74.95 | 66.8 | 0.157*** |
| <i>Mean number of ANC</i> | <i>1.43</i> | <i>1.7</i> | <i>2.05</i> | <i>2.2</i> | <i>.0481***</i> |
| <i>Of those who received some ANC, time of first ANC</i> | | | | | |
| Had their first ANC during 3rd Trimester | 26.23 | 24.86 | 8.2 | 1.42 | |
| Had their first ANC during 2nd Trimester | 37.01 | 34.12 | 33.01 | 9.96 | |
| Had their first ANC during 1st Trimester itself | 11.86 | 21.23 | 56.3 | 88.2 | -0.215*** |
| <i>Those who received different components of ANC</i> | | | | | |
| Had their weight measured during ANC | 65.03 | 59.17 | 85.8 | 83.9 | -.0456 |
| Had their height measured during ANC | 46.59 | 19.42 | 56.12 | 83.13 | -.545*** |
| Had their BP checked during ANC | 42.04 | 20.51 | 63.7 | 76.8 | -.351*** |
| Had their Blood Tested during ANC | 23.59 | 23.23 | 53.9 | 59.8 | -.0652* |
| Had their Urine Tested during ANC | 16.89 | 12.34 | 38.45 | 38.6 | -.0499 |
| Had their Abdomen examined during ANC | 9.94 | 58.62 | 60.2 | 10.5 | .978*** |
| Had their Internal examined during ANC | 16.89 | 22.87 | 11.26 | 5.28 | .119*** |
| Had their X-ray done during ANC | 0.24 | 0.73 | 6.21 | 6.71 | -.000 |
| <i>Other aspects</i> | | | | | |
| Intake of IFA | 71.7% | 78.6% | 96.5% | 87.8% | 0.0980*** |
| Vaccination of TT | 77.1% | 83.5% | 95% | 88% | 0.104*** |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | |

2. How many of these pregnant women ensured a safe delivery?

(a) Where did they deliver and who assisted them?: Deliveries taking place in a health facility under a medical professional or taking place at home but conducted by a health professional are considered as safe deliveries. Even though childbirth is a natural process, the presence of a trained assistance is important to ensure timely act during any untoward emergencies that may appear and save the life of both the mother and the child. Taking the definition of safe delivery (either institutional delivery or home delivery attended by Doctor/Nurse/TBA), according to RCH survey, the percentage of safe deliveries in MP was around 35.5% in 2004. This is lower than the national average of 48%. In Ratlam, however, the corresponding figures were a little more than 50%.

The baseline survey showed that in Bajna, 68% of the deliveries were taking place at home, while the same was 75% in Sailana. Reflecting the same, less than 35% of the deliveries in Bajna and less than 30% of the deliveries in Sailana were attended by health professionals. Most of the deliveries were attended by a traditional birth attendant (TBA). TBA is the most prevalent option, possibly due to a greater accessibility. Interestingly, by the time of end line survey, things seem to have changed. In Bajna, only 31% of the deliveries were taking place at home whereas in Sailana, still 71% continued to deliver at home. In Bajna, 77% of births were attended by a health professional compared to only 35% in Sailana. Deliveries not attended by either a health professional or a trained / traditional birth attendant was only 7% in Bajna compared to 33% in Sailana. See table 2 for details.

(b) Did new mothers receive any orientation post delivery about subsequent health care and child care?: Since most of the deliveries, especially during the baseline survey, were not institutional, but took place at home, any orientation regarding child care coming from health workers / anganwadi workers / birth attendants or even elders in the family is crucial for the mother of the new born. Reflecting the high rates of births taking place at home and attended by TBA in both Bajna and Sailana, mothers who received some orientation post delivery were found to be very low (15% in Bajna and 30% in Sailana) during the base line survey. The end line survey, 3 years later shows that around 35% of mothers received orientation post delivery. Though both Bajna and Sailana have similar figures at end line, because Bajna started from a very poor base line, the improvements are more than double in Bajna while it was not so much in Sailana.

| | Base line Survey | | End line survey | | Diff in Diff |
|---|------------------|---------|-----------------|---------|--------------|
| Place of Delivery | Bajna | Sailana | Bajna | Sailana | Coef |
| Home | 67.5% | 74.9% | 31.3% | 71.3% | |
| Government Health Facility | 29.8% | 16.5% | 67.7% | 28.7% | 0.325*** |
| Private Health Facility | 1.9% | 7.9% | 0.9% | 0% | |
| Assistance during Delivery | | | | | |
| Health Professional | 34.5% | 29.0% | 76.7% | 34.9% | 0.358*** |
| Traditional Birth Attendant | 49.6% | 61.2% | 16.1% | 32.1% | |
| Delivery assisted by not-trained/ non-health professional | 16.1% | 9.8% | 7.2% | 32.9% | |
| Delivery not in govt. b'se it was very far off | 50.1% | 51.7% | 21.4% | 27.3% | |
| Orientation about child care and post delivery care after delivery | 14.8% | 33.6% | 35.3% | 33.1% | 0.1596*** |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | |

3. Were the newborns taken care of properly?

It is important that wherever the child is born - at home or at institutions - they are born healthy and given the care that they deserve. A healthy newborn is the outcome of proper antenatal care of pregnant women. But to ensure that the newborn children who were healthy continues to be healthy, and those born 'not so healthy' recovers, adequate care during postnatal stage is important. Unfortunately, often, there is no information about the health status of newborns in terms of birth weight of the child.

(a) Newborns whose weight was measured at birth: As a consequence of non-institutional delivery, most of the children's weight was not measured at birth. Even those children whose births were attended by TBA go with their weights unmeasured. The consequence of such an action is that often the children born with underweight are missed out, both in terms of corrective treatment as well from the data. The baseline survey shows that weight was measured at birth only for 34% newborns in Bajna and 42% in Sailana. But end line survey shows that this has improved to 79% in Bajna and 82% in Sailana.

(b) Breast Feeding and complementary feeding Practices: Exclusive breastfeeding helps an infant to grow with adequate nutritional supplement at the beginning, but subsequently, the child should be provided with timely and appropriate complementary feeding. However, at the outset, it must be noted that the concept of exclusive breast feeding, especially at birth, did not exist in the communities in areas under study (both Bajna and Sailana). Along with mother's milk, infants were generally fed with goat's milk and water, right from the first day itself. On the other hand, the peculiarity of the area is that often breast milk was not given to newborns immediately after birth. Breast-feeding, it was noted, started only after a few days of birth. This was based on some traditional beliefs. So often the question relevant in this context is whether mother's milk was given apart from other fluids within first few hours of birth. In Bajna, 62% of the newborns were breastfed at birth while this was as low as 46% in Sailana. This figures in fact is much better than the figures for MP state as available from NFHS III (Overall 15%; in rural areas, only 13%). By the time of end line survey, more than 77% of mothers in Bajna and 76% in Sailana had breastfed the newborns at birth.

Large proportion of mothers squeezed out the milk in the belief that they were not good for the health of the child. Baseline survey shows that on an average, 41% mothers squeezed out the milk. The end line survey shows that in Bajna, 38% of mothers did it in comparison to 75% mothers in Sailana.

Baseline survey shows that 93% of the children in Bajna and 90% of the children in Sailana among the 0-5 months age group was exclusively provided breast feeding as well as supplementary fluids like goat milk, and no solid or semi-solid food was provided to these children. Regular complementary feeding in terms of semi-solid food reportedly started by the time the child is three months old in these blocks, and almost all children were provided with some complementary food regularly by the time they are 6 months old. In Bajna, however, around 8 percent children in 6-12 month age groups were given only liquid food and mother's milk, solid supplementary feeding was not provided.

© Were children getting enough nutrition to ensure appropriate weight for age? (The definitions and criteria for estimating underweight children are explained in **Annex 3**).

The baseline survey showed that only around 1/5th of the children in their early ages had proper weight for age in both Bajna (21%) and Sailana (22%). Another 15-20 % in these blocks were mildly undernourished (weight for age is <-1 SD). However, an alarming majority of children in their first year were found to be severely malnourished (65% in Bajna and 58% in Sailana). Worse, 34% in Bajna and 31% in Sailana were acutely malnourished.

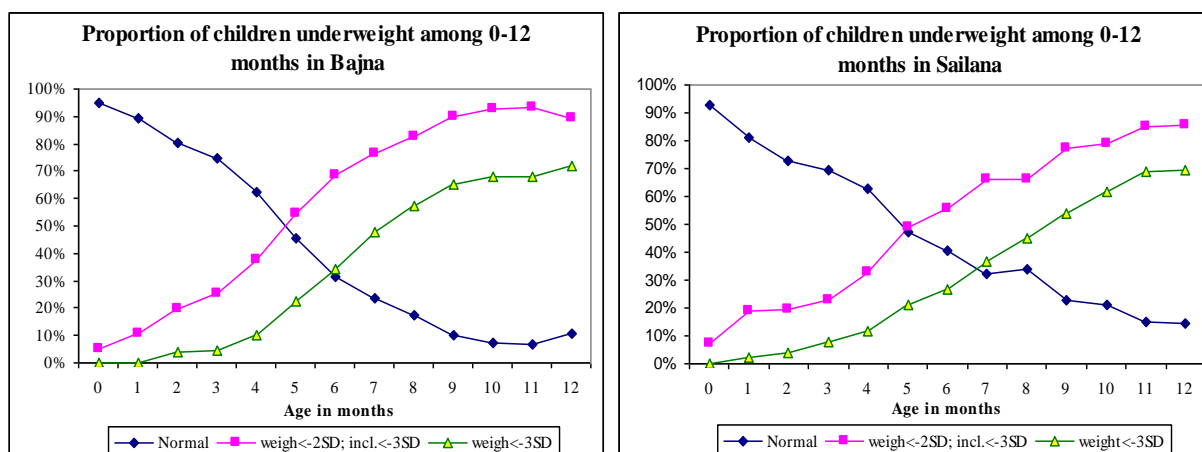
Three years down the line, there is definitely improvement. The proportion of normal children has improved to 27% in Bajna and 29% in Sailana. However, most heartening is the reduction in the proportion of severely and acutely malnourished children in both blocks, but significantly better reduction in the Bajna. The decline in the proportion of underweight children in the households in Bajna was 13% and 11% respectively for severe (proportion of children with <-2SD weight for age) and acute malnourishment cases (proportion of children with weight for age is <-3SD). See table 4.

| Measures of underweight | Base line Survey | | End line survey | | Diff in Diff |
|---|------------------|---------|-----------------|---------|--------------|
| | Bajna | Sailana | Bajna | Sailana | Coef |
| Proportion of children with normal weight | 20.6% | 21.9% | 27.1% | 29.3% | -0.007 |
| Proportion of children with <-1SD weight | 79.4% | 78.0% | 72.8% | 70.7% | 0.007 |
| Proportion of children with <-2SD weight | 64.8% | 57.9% | 43.3% | 49.4% | -0.129** |
| Proportion of children with <-3SD weight | 33.6% | 31.0% | 21.6% | 30.0% | -0.110** |
| No complementary food even at 12+ months | 35.17% | 19.6% | 4.4% | 2.84% | -2.212*** |
| Complementary food started within 10 months | 56.9% | 52.21% | 96.9% | 59.02% | 0.331*** |
| Mean height- in cm for boys | 53.2 | 59.6 | 57.3 | 58.0 | 5.59*** |
| Mean height – in for girls | 52.8 | 57.4 | 56.9 | 57.8 | 3.83*** |

indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); * indicates significance at 0.001 level (statistically significant at 99% level)*

Further analysis of the data from both baseline and end line survey reveals a shocking factor – that the majority of children were born normal, but with every successive day and month in their life, their weight for age deteriorates. See the graphs below using base line survey data for this. Clearly, this shows that there is some mismatch between the way children in this age group is *cared* for as against the way they should have been. Various factors, such as mother’s nutrition intake, breastfeeding practices and supplementary feeding habits influence the nourishment status of children and the above analysis shows poor performance of the two blocks in all these aspects, naturally leading to poor weight for age.

Graph 1 & 2



© Who takes care of the child? In these regions, habitations mostly consist of relatives and distant relatives or people belonging to same community. Hence there is a strong bonding among the members of the households as well as that of the community. Most of the time, the newborn is taken care of by

the mother herself, or one of the family members, including elder siblings or grandparents. During the base line survey, the involvement of father in child care was reported only in the case of 20% of the 0-12 year olds in Bajna, in contrast to 61% of the households in Sailana reporting father's role in infant care. However, in both blocks, the involvement of fathers is mainly reported for a short period of time in a day, and it mostly involved "taking child for a walk around". Very few households reported that the father was involved in taking child for immunization and to health centres.

In the end line survey, 88% of households in Bajna and 83% households in Sailana reported that fathers are now involved in infant care in one way or other. Moreover, 27% of households in Bajna and around 40% households in Sailana reported that fathers take care of infants to a large extent of time. There is definitely an improvement in father's involvement in child care.

Summary of results: Sub-Stage 1

The analysis of ante-natal care practices of pregnant women, modalities of delivery and post-delivery practices and care for the new born child shows that the net gains in Bajna were significantly better than the same in Sailana. In the context of similar socio-economic, cultural and geographic profiles of both Bajna and Sailana being similar, the larger net gains in Bajna indicates the impact of the interventions initiated by Bachpan.

Sub-Stage 2: Take off period? Children between 1- 2 years of age

The basic foundation of a child's development is cemented with proper antenatal care and safe delivery and after delivery, the kind of child care provided to the infant. The base for brain development of the newborn also starts during the first year birth. The second year of a toddler's life is very critical for the development of brain as well as cognitive and physical capabilities of the child. At the same time, this is the stage when the child also becomes extremely vulnerable to environmental influence. This is also the stage when corrective measures should be acted upon to compensate for the nutritional inadequacy accumulated during the later months of the first year. If the second year also passes by without correction, the deprivation may in fact result in deficits that might be irreversible. Immunization of child against various communicable diseases and other childhood illnesses are vital during this period. The nutritional needs of the child are also an area to be given adequate attention.

Are the children getting the attention they deserve during their second year in these backward tribal regions? The indicators used to gauge their development during this sub-stage are: (a) children in the 12-23 months (1-2 years) age groups received vaccinations against the 6 serious but preventable diseases which are essential for child survival; and (b) children who are not underweight for their age.

During the household survey, mothers were asked whether their children were immunized against tuberculosis (BCG), diphtheria and tetanus (DPT), poliomyelitis and measles. Full immunization of a child includes BCG, Measles, three booster shots of DPT, and three Polio shots excluding the Polio 0. The NFHS II (1999) reported that 17% of the children in the 12-23 months age group in rural areas of the state of MP received all immunization and by 2005-06 (NFHS III) this has improved to 32%. For the district of Ratlam, the percentage of children fully immunized by the second year of their life was only 5.7 (NFHS II).

How successful are the government providers in these backward tribal blocks in ensuring full immunization? How sensitized are the households about the need to provide their children with all vaccines and follow the requirements of full immunization? The picture that emerges from the baseline survey was quite gloomy and showed figures much lower than the MP state averages as available from NFHS II and III. It almost seemed like as the child grows older and enter the second year of their life, much apathy creeps into the household behavior in terms of child care. All the indicators related to immunization in both "Bachpan" block (Bajna) and control block (Sailana) improved tremendously, but except for BCG, measles and hepatitis B vaccine, the improvements in "Bachpan" (intervention) block was significantly better than the control block. See table 5 for details.

During the baseline survey, in Bajna, only 5.2% of the children in the age group of 12-23 months had received full immunization while the figure in Sailana was slightly better at 6.5%. Three years later, these figures have improved many folds. A disaggregated analysis of the proportion of children receiving different doses of polio and DPT vaccine during the baseline survey highlights a major problem that existed with the immunization scenario in these blocks, especially in Bajna. The baseline survey data shows that with the successive booster shots (3 doses) of Polio and DPT vaccines, the percentage of children getting immunized got decreased, especially in Bajna. In Bajna, while 77% of the children were immunized with DPT 1, only 16% got immunization for DPT 3. Similar was the trend with polio doses. As a result, while many children got one dose of these vaccines, those who got complete vaccination were much less and hence only those with full immunization were actually protected from the diseases. The emerging lesson for providers in Bajna was that while people knew about various vaccines, they were

not aware of the components of these vaccines and its requirements and about the need to provide different doses carefully. While definitely this was an indication of the 'lack of awareness' among community and parents, it was also an indication of the inadequate IEC (information, education and communication) efforts on the part of schemes. The baseline survey results also pointed to the 'fatigue' factor where the campaigners lost the initial momentum and were not able to mobilize the community to get the booster vaccines as well. Also, there was some lethargy setting in parents with successive doses. This problem was more serious in Bajna than in Sailana.

| Vaccination | Baseline Survey | | End line survey | | DID |
|------------------------|-----------------|---------|-----------------|---------|-----------|
| | Bajna | Sailana | Bajna | Sailana | Coef |
| BCG | 82.65% | 77.16% | 96.25% | 94.85% | -0.04089 |
| DPT 1 | 77.44% | 66.9% | 95.63% | 94.33% | -0.0924** |
| DPT 2 | 47.63% | 62.47% | 83.13% | 91.24% | 0.0672* |
| DPT 3 | 16.4% | 55.71% | 68.33% | 84.79% | 0.228*** |
| All 3 DPT | 15.77% | 54.78% | 66.88% | 83.76% | 0.221*** |
| Polio 0 | 70.5% | 91.84% | 94.58% | 94.33% | 0.216*** |
| Polio 1 | 89.27% | 94.64% | 91.88% | 94.33% | 0.029 |
| Polio 2 | 65.93% | 92.77% | 81.67% | 90.98% | 0.175*** |
| Polio 3 | 20.19% | 87.88% | 69.79% | 81.96% | 0.555*** |
| ALL 3 POLIO | 19.4% | 87.88% | 68.33% | 81.19% | 0.556*** |
| Measles | 26.34% | 8.16% | 72.08% | 70.88% | -0.169*** |
| Hepatitis B | 2.37% | 0.47% | 28.33% | 36.6% | -0.101** |
| Full imm. Excl measles | 9.94% | 53.38% | 65.21% | 79.38% | 0.292*** |
| Full Immunization | 5.21% | 6.53% | 56.88% | 66.75% | -0.086** |

indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); * indicates significance at 0.001 level (statistically significant at 99% level)*

| Vaccination | BOYS | | | | | GIRLS | | | | |
|------------------------|-----------------|---------|-----------------|---------|-----------|-----------------|---------|-----------------|---------|-----------|
| | Baseline Survey | | End line survey | | DID | Baseline Survey | | End line survey | | DID |
| | Bajna | Sailana | Bajna | Sailana | Coef | Bajna | Sailana | Bajna | Sailana | Coef |
| BCG | 81.92 | 76.68 | 96.5 | 94.55 | -0.0329 | 83.57 | 77.84 | 95.96 | 95.16 | -0.049 |
| All 3 DPT | 15.25 | 53.36 | 68.87 | 83.17 | 0.238*** | 16.43 | 56.82 | 64.57 | 84.41 | 0.205*** |
| Polio 0 | 68.93 | 92.49 | 96.5 | 95.05 | 0.250*** | 72.5 | 90.91 | 92.38 | 93.55 | 0.172*** |
| ALL 3 POLIO | 17.23 | 87.75 | 69.26 | 80.69 | 0.5908*** | 22.14 | 88.07 | 67.26 | 81.72 | 0.5146*** |
| Measles | 26.84 | 8.7 | 72.37 | 68.81 | -0.145*** | 25.71 | 7.39 | 71.75 | 73.12 | -0.196** |
| Hepatitis B | 3.39 | 0.4 | 32.68 | 38.61 | -0.089 | 1.07 | 0.57 | 23.32 | 34.41 | -0.115** |
| Full Immu.zn | 4.8 | 6.72 | 57.59 | 65.84 | -0.0633 | 5.71 | 6.25 | 56.05 | 67.74 | -0.1115* |
| Full imm. Excl measles | 9.32 | 51.38 | 66.54 | 79.21 | 0.293*** | 10.71 | 56.25 | 63.68 | 79.57 | 0.2964*** |

indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); * indicates significance at 0.001 level (statistically significant at 99% level)*

By the time of end line survey three years later, things definitely improved in both blocks, but the improvements in Bajna were much more significant, except for BCG, measles and hepatitis B vaccine. There was not much difference in terms of the improvements in the immunization of girl and boy children.

Are children in Bajna and Sailana growing healthy and well nourished in their 1-2 years? Are they compensated for all the undernourishment accumulated during their first year? A comparison of malnutrition status (using weight for age) of the 12 -24 months old children with that of infants (0-12 months) using baseline survey data shows that the conditions of children had not improved from their status in the first year; rather, they had further deteriorated in their second year. If in the first year of their life only 41% were severely malnourished in Bajna and 33% in Sailana, by the time they finish their second year, their share went up to 66% in Bajna and 51% in Sailana. This is very quite similar to the figures for rural Madhya Pradesh (62.6% in 005-06) as reported by NFHS III. On the other hand, proportion of children who had desirable weight for age (>-2SD) reduced from 34% in Bajna and 53% in Sailana in the 0-12 month's age group to less than 16% in Bajna and 22% Sailana.

Why is it that with age, weight for age of the children did not improve, rather deteriorated, as evident in the baseline survey? There are standard arguments about parental education and ignorance was the obvious reasons, but the ignorance about their children's undernourished status could have been the result of lack of regular growth monitoring. The severe underweight also could have been the result of lack of either adequate supplementary food, or inappropriate feeding behaviors. Here, various possible factors are examined. In both Bajna and Sailana, less than 7% of the parents thought that their ward was underweight. Naturally, any corrective efforts can happen only if there is awareness and knowledge about the actual status of malnourishment of the children. Since more than 80% of the parents in these blocks are illiterates, their only source of learning about their children's weight for age status (and whether that weight was appropriate for age) was through the anganwadi workers or health workers. The statistics from the household survey shows that among the 12-23 months age group children, only 42% children in Bajna and 57% children Sailana got their height and weight were measured regularly at *anganwadi centres* (AWC) Parents who were literate ensured that their children's growth monitoring was regularly taken at AWCs more than the illiterate parents.

Parents learned about their children's weight for age status from AWC when they were measured as part of the regular growth monitoring exercise of children at the AWC. But even for this, parents need to know that these services are available at AWC and realize that they should get their ward's growth monitored regularly at AWC. During the household survey it was found that around 9% households in Bajna and 2 % in Sailana were not aware that such services were provided at the AWCs. Half of the respondents (54% in Bajna and 44% in Sailana) reported that there was no such regular growth monitoring taking place (and hence their ward's growth monitoring not happening) at AWCs.

For this small proportion of children whose growth was monitored regularly, even smaller proportion of children's parents were in the habit (or capable of?) maintaining the growth monitoring records of their children - only 12% of in Bajna and 26% in Sailana. This habit is perhaps also linked to the literacy status of parents - while only 11% of the illiterates had some records of their children's growth monitoring records, this was 18% among literate parents in Bajna. In Sailana, this was 23% among illiterates and 40% in Sailana.

However, the situation has improved significantly between base line survey and three years later, as evident from the end line survey results. The practice of regular measuring of height and weight of children at AWC has improved between base line and end line survey periods, and more evidently in the

intervention block (5 percentage points better than that in control block). Regular growth monitoring at AWC has also improved in both blocks, but the improvements in both blocks were not significantly different. Also a comparison of the weight for age status of 12-24 year olds between the baseline survey and end line survey reveals that the proportion of children with severe malnutrition (proportion of children with less than 3SD weight for age) declined significantly in the intervention block compared to the control block (improvements is 7 percentage points better in Bajna than in Sailana).

| | Baseline Survey | | End line survey | | DID |
|---|-----------------|---------|-----------------|---------|------------|
| | Bajna | Sailana | Bajna | Sailana | Coef |
| Weight <-1SD | 91.96% | 92.31% | 91.67% | 81.19% | 0.108*** |
| Weight <-2SD | 85.65% | 78.32% | 82.08% | 67.01% | 0.077* |
| Weight <-3SD | 66.25% | 51.05% | 58.54% | 44.07% | -0.0738*** |
| regular measure of height& weight | 41.96% | 56.64% | 65.21% | 73.45% | 0.052** |
| Regular growth monitoring | 37.54% | 53.85% | 52.29% | 69.07% | -0.00474 |
| Mean height – in cm for boys | 68.2cm | 72.1cm | 70.33cm | 70.4cm | 3.81** |
| Mean height – in cm for girls | 66.5cm | 70.4cm | 68.8cm | 70.4cm | 1.97 |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | |

In a situation where more children were underweight, but most often not identified, the remedial actions become more challenging. The remedial measures to compensate the underweight include providing adequate supplementary nutrition – either through additional food supplements at home or other micro nutrients at AWCs. The baseline survey shows that at home, around 34% of the households in Bajna and 53% in Sailana reported that these children were provided with water and goat’s milk other than breastfeeding. Around 33% households in Bajna and 35% in Sailana reported that they provided children the usual cereals and pulses everyone else took at home (rice, roti, dal etc). In addition to this, 4% households in Bajna and 5% in Sailana reported that the children were also given some vegetables in addition to cereals. However, 29% households in Bajna and 8% in Sailana reported no supplementary food for the children in this age group, which is quite an alarming sign. The end line survey shows tremendous improvements in the supplementary food provided. 92% households in Bajna and 97% in Sailana reported feeding children in this age group with rice or roti and dal. Similarly, 77% of households in Bajna and 75% of the households in Sailana reported the children in this age group were provided with fruits and vegetables as supplementary food. Interestingly, the tendency to feed supplementary baby food like cerelac and lactogen is increasing in these communities – around 39% of households (27% in Bajna and 54% in Sailana) reported providing their children with one of these!

The households who fed the child with cereals, pulses and vegetables were proportionately more among the high asset group compared to the lower groups – a clear indication that the feeding habits were very much a reflection of the household prosperity level. The differences were also obvious with respect to the social groups – which people in the general category tended to feed their children supplementary food than the majority scheduled tribes. However, there was no significant difference in terms of literacy of the parents. Also, there were no gender differences in terms of what was fed to the children.

For the children in the age group of 12-23 months, during the baseline survey period, only 36% of the households in Bajna and 41% percent in Sailana were availing services of AWCs. Distance to the AWCs and hence access seemed to have been the major issue for non-availing the services of AWCs, especially in Bajna since parents were not interested in sending their wards away from home at that age. In Sailana, half of those who did not use AWC for the age group (12-23 months) reported that there was no activity in AWCs for their children and hence did not send their children there. By the time of end line survey, 59% in Bajna and 56% in Sailana reported availing the services of AWC for child care, and another 20% in Bajna and 16% in Sailana reported using health sub-centre, and hence not using AWC services.

The households reported during end line survey that they took special measures to ensure that the child stays clean and healthy, which they had taken for granted previously. These measures include keeping home clean and neat, regular bathing of children and washing their clothes regularly, providing timely healthy diet and regular check up with doctors on child’s health care matters. It is interesting to note that these measures were reportedly more prevalent in Bajna than in Sailana. The most notable differences are the proportion of parents reported that they took these measures to a great extent in Bajna and Sailana. Scheduled checkup with doctors were also different between Bajna and Sailana. See table 8.

| Measures | BAJNA | | | SAILANA | | |
|--|-------------------|----------------|----------|-------------------|----------------|----------|
| | To a great extent | To some extent | Not done | To a great extent | To some extent | Not done |
| Keep home clean and relatively germ free | 41.04% | 51.46% | 7.5% | 14.95% | 67.8% | 17.3% |
| Proper care of sanitation of the child | 23.96% | 59.2% | 16.9% | 6.44% | 67.5% | 26.03% |
| Regular bath | 52.92% | 39.8% | 7.29% | 17.8% | 54.9% | 27.3% |
| Regular wash of child’s clothes and other materials used by the child (such as bottles, utensils etc.) | 19.4% | 46.3% | 34.4% | 13.7% | 57.99% | 28.4% |
| Regular wash of clothes/other materials used by the person taking care of the child | 23.75% | 48.13% | 28.13% | 7.7% | 57.99% | 34.3% |
| Keeping the child away from people having any infection | 10.2% | 60% | 29.8% | 5.9% | 57.99% | 36.08% |
| Healthy diet | 38.13% | 51.04% | 10.83% | 17.53% | 67.3% | 15.21% |
| Timely diet | 23.96% | 52.1% | 23.96% | 16.24% | 63.92% | 19.9% |
| Scheduled check-up of the child by qualified doctor/person | 10.6% | 63.96% | 25.42% | 3.4% | 34.5% | 62.11% |

Summary: Sub-State 2

The analysis of net gains (in improving the immunization practices and child’s weight for age outcomes) shows that in Bajna, the improvements were better compared to Sailana. This is especially notable with respect to the complete doses of DPT and polio as well as in reducing the severe underweight among children. It seems like the interventions under the project Bachpan have helped in accelerating the pace of child development at this stage in the trial villages.

Sub-Stage 3: Time to go to *Anganwadi*? Tale of Children between 2+ to 5 years of age

The early years of a child's life are important not only for the physical growth and nutrition adequacy, but also for inculcating social skills and preparing them for education in a school. Hence, during the 2+ to 5 years, child care behavior requires to ensure nutrition sufficiency as well as meaningful pre-school education. In Bajna and Sailana, during the baseline survey, it was observed that development of children in the first 2 years was marred by insufficient provision of health care and nutrition at home as well as at the AWC, and deprivation in terms of parental care and attention for developing psycho-social skills. Three years later, there were improvements, more so in Bajna, in various aspects related to child care in early years.

Did the accumulated deficits of first two years affect the growth in the subsequent years of a child's life? Or, were these deficits compensated with corrective actions and care during this stage? Did improvements in early child care outcomes benefited the later child years? This section of the report chronicles a child's development during this stage (2+ to 3 years). In this section, we look at 4 main child development indicators: (a) growth monitoring and weight for age of children, (b) supplementary nutrition provision, (c) attendance of anganwadi centre, (d) participation in pre-school education, and (e) school readiness of children.

(a) Growth monitoring and weight for age of children: Regular monitoring of weight and height, both by parents and at anganwadi centre, has improved tremendously between base line survey and end line survey in both Bajna and Sailana, but more significantly in Bajna, as indicated by the significant coefficients of 'difference in difference'.

However, the proportion of children with severely underweight status for age has increased between baseline survey and end line survey in Bajna, as against a slight decline in Sailana. This is a matter of concern. It shows that regular monitoring of weight for age has not led to improved nutrition status. Another matter of concern was also the proportion of severe underweight children among girls. The general perception about tribal communities as "devoid of gender discrimination" is challenged here.

(b) Supplementary nutrition provision: During the baseline survey, 46% of the parents in Bajna and 61% of the parents in Sailana reported that their ward's height and weight were measured regularly at the anganwadi centre, and by the time of end line survey, the percentage of parents reporting regular monitoring of height and weight of children increased to 84% and 86% respectively in Bajna and Sailana. The growth monitoring practices were better for this age group compared to sub-stage II (1-2 years of age) in both blocks for various reasons. However, the most important reason for increase in growth monitoring at this stage was the increase in AWC attendance by children, both for supplementary nutrition as well as for pre-school education. During the base line survey, it was observed that growth monitoring by AWC on a regular basis happened for 51% of children as reported in Bajna and around 59% children in Sailana. In the three year period that followed, this has improved to 71% and 74% in Bajna and Sailana. But the magnitude of improvements was more in Bajna.

Following the findings of still persisting, or rather worsening of severe malnutrition among children, as indicated by high proportion of children with less than median weight for age, there is a need to compensate the deficits by supplementary nutrition and food. During the baseline survey, parents of 43% children in the age group in Bajna and 44% in Sailana reported that their children were receiving

Vitamin A drops from AWC. Similarly, 44% in Bajna and 43% in Sailana reportedly received IFA supplements. However, given the high proportion of children who were severely and mildly underweight, the percentage of children receiving these supplements should have been higher. The need and supply/demand gap could be the result of actual low utilization of AWCs in Bajna and Sailana.

The end line survey results indicate to large improvements in the proportion of children receiving Vitamin A and IFA supplements. Parents of more than 82% children in Bajna and 76% children Sailana reported receiving Vitamin A supplements, while 71% in Bajna and 49% in Sailana reported that their wards were provided with IFA supplements, and the increase in the provision of Vitamin A supplements and IFA were significantly more in Bajna, indicating improving pro-active efforts to compensate for poor nutrition status of children.

| Table 9: Improvements in the measures of height and weight, supplements of Vitamin A & IFA and participation in AWC of children in 3-5 years of age | | | | | |
|---|-----------------|---------|-----------------|---------|-----------|
| | BASELINE SURVEY | | END LINE SURVEY | | DID |
| | BAJNA | SAILANA | BAJNA | SAILANA | Coeff |
| Weight for age <-1SD | 92.25 | 94.6 | 91.44 | 92.33 | 0.0145 |
| Weight for age <-2SD | 74.71 | 79.64 | 81.18 | 75.4 | 0.107*** |
| Weight for age <-3SD | 40.09 | 53.15 | 53.19 | 45.18 | 0.21*** |
| Measure height and weight | 45.68 | 61.29 | 84.04 | 85.57 | 0.114*** |
| AWC growth monitoring | 48.79 | 58.85 | 71.47 | 73.73 | 0.053*** |
| Vitamin A Supplement | 42.57 | 43.82 | 82.61 | 76.46 | 0.0764*** |
| IFA supplement | 44.35 | 43.3 | 71.2 | 48.67 | 0.2439*** |
| Not attending AWC | 34.63 | 58.33 | 9.65 | 16.6 | 0.1679*** |
| Mean days children attending AWC | 5.18 | 5.17 | 5.25 | 5.04 | 0.192* |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | |

© **Regularly attending Anganwadi centre:** The baseline survey showed that 35% of children in Bajna and 58% of children in Sailana were not attending any AWC. Among the five year olds, only 73% in Bajna and 48% in Sailana were attending anganwadi centre during the baseline survey, which improved to 89% and 85% respectively during end line survey three years later. Reportedly, children in both blocks, in both baseline survey and end line survey, were attending AWC at least 5 days a week.

(d) **Participation in pre-school education:** Why is pre-school education important? Pre-school education facilitates the psycho social development of children in the age group. Pre-school education is also complementary to primary education. Various evidences show that pre-school attendance reduces the under-age enrolment in schools, enhances school readiness and retention of children in school, and facilitate the attendance of elder siblings in school by freeing them of their responsibilities in terms of sibling care.

It was observed in the field that because of the emphasis on increasing the enrolment in *anganwadis*, the anganwadi worker undertakes yearly census of children in the pre-school age. Hence all children get “enrolled”, but it is important to remember that enrolment does not always translate to effective

access, indicated by attendance. The base line data shows that the attendance was well below universal in both blocks. Many children were still not attending pre-school. Those who were attending, some children were not regular and attended pre-school only for a couple of days a week. Those children who were attending anganwadi pre-school spent around an average of 2 -3 hours per day there (14 hours per week as reported in Bajna and 10 hours as reported in Sailana). As the areas under study are an undulating terrain with households spread across a vast areas, the location of the *anganwadi* center seemed a very critical factor in determining access.

Three years down the line, the end line survey data shows that attendance of AWC/ balwadi improved tremendously in both blocks, but more so in Sailana, the control block. The major increases in both blocks were in the proportion of children whose parents reported that their wards spent more than 2 hours at the AWC.

Attractiveness of AWC for children also depends on the availability of play materials. During the base line survey, 43% of the parents' whose children were currently attending pre-school in Bajna and 34% in Sailana reported that there are some toys available at the AWC for the children to play with. During the end line survey, around 64% of parents each in both Bajna and Sailana reported availability of toys for children to play with in anganwadis.

| Table 10: Details of attendance of Anganwadi by 3-5 year old children | | | | |
|---|------------------|----------------|-----------------|----------------|
| | BASE LINE SURVEY | | END LINE SURVEY | |
| | Bajna | Sailana | Bajna | Sailana |
| Child (3-5years) enrolled in any AWC/ balwadi | 67.2% | 59% | 90.96% | 83.5% |
| Child attending AWC | 64.3% | 55.1% | 90.05% | 81.9% |
| Attending AWC for 5+ days | 50.3% | 31.2% | 80.6% | 59.6% |
| % of children spending >2 hours at AWC | 0.5% | 2.5% | 94.8% | 84.8% |
| Anganwadi open for 5+ days | 59% | 40.24% | 97.82% | 96.54% |
| Supplementary nutrition provided every day | 65% | 48.7% | 97.8% | 96.5% |
| Provision of toys at AWC | 42.7% | 34.8% | 64.5% | 64.2% |
| Parents able to report what child learns at AWC | 28.5% | 11.25% | 86.2% | 37.8% |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | |

(e) Testing children for School Readiness: The school readiness tests, as prepared by the NCERT, are for children in the 4 to 5 years age group. In both Bajna and Sailana, especially in Bajna, it was noticed that children were generally enrolled in school at the age of 5. The test attempts to see whether the children attending *anganwadis* were “prepared” enough or “ready” to attend school, to capture if a child can differentiate between different shapes, pictures, sizes, numbers and sounds. It is a verbal test. The school readiness tests were originally designed to be conducted with grade I students to capture the component of pre-schooling in the *anganwadi* centers. This, for obvious reasons, necessitated the evaluation of *anganwadi* students and not those in the first grade.

Another option would have been testing the children at home, but the fact that all children are “enrolled” in *anganwadis* (as the anganwadi workers undertake regular child census and all eligible children were automatically enrolled in both *anganwadi* and primary school). There was no child under the 5-year age group who was not on the roll of *anganwadi*. Hence the only difference in school readiness tests would have emerged from those who attend pre-school regularly and those who do not. During household survey, it would have been difficult to test the pre-school attending children since

they were in *anganwadis* and not at home. Hence it was decided that the ideal situation is test the children at *anganwadis*, and see whether these children have really reached the desirable levels of school readiness. Those children in the 4 to 5 years age group are the oldest age group at an *anganwadi* centre and would have received pre-school education. For this exercise we chose the *anganwadi* as our focal point. For capturing the levels of school readiness of those children who were enrolled, but not attending regularly, the households were asked to bring the child to the *anganwadi* on the day of the school readiness tests – thus even those not regularly attended were also tested.

Preparing child for the test at AWCs: In order to make the children comfortable before testing them, a few friendly questions were asked such as “what is the name of your father/mother?”, “can you touch your left ear with right hand?” etc. The responses to these questions were analyzed, but not used for scoring their readiness. More than 96% of children in both Bajna and Sailana who were tested (in 4-6 years age group) were able to “tell” their name to the investigator during base line and end line surveys. To indicate the changes that happened between base line and end line surveys, a classic indicator is the ability of children to follow the instruction to “touch their left ear with right hand”. During the base line survey, in Bajna, only 27% children could respond to the question of touching their “left ear with right hand” while in Sailana, 73% children knew their “left” ear and “right” hand and could follow the instruction to do it. But by the time of end line survey, 95% children attending AWCs in Bajna could do this while the figures remained more or less same in Sailana. In terms of improvements, the results show significantly better improvements in Bajna.

In terms of school readiness test, a total of 32 questions were asked to these children, 16 questions to test the “Reading Readiness” and the rest 16 questions to test their “Number Readiness”. Questions regarding “Reading Readiness” included 2 questions each aimed at capturing (a) sentence comprehension, (b) visual perception, and (c) visual discrimination, and (d) words of same sounds, and 4 questions each on (e) figure recognition, and (f) sound recognition. “Number Readiness” questions consisted of those on: (i) number concept, (ii) space concept, (iii) more or less, (iv) near or far, (v) thin or thick, and (vi) classification of tangible and intangible items.

Mean scores: The children who attend *anganwadis* were expected to be good in most of these skills since these are the aptitudes the children should possess before entering schools, as a result of preparation in AWCs. The NCERT’s Baseline Study for primary achievement had envisaged at least 80% children attaining 80% or more skills. For school readiness, tests do not have any such prescriptions.

The mean score for “Reading Readiness” was 46% in Bajna during base line survey, which improved to 79% after the interventions. On the other hand, mean score for “Reading Readiness” in Sailana was 56% during base line survey, which three years later improved to only 71% as evident from the end line survey. In the case of “Number Readiness”, mean scores of 5 year olds in Bajna improved from 64% to 78% between base line and end line surveys, while in Sailana, it remained more or less same around 76%.

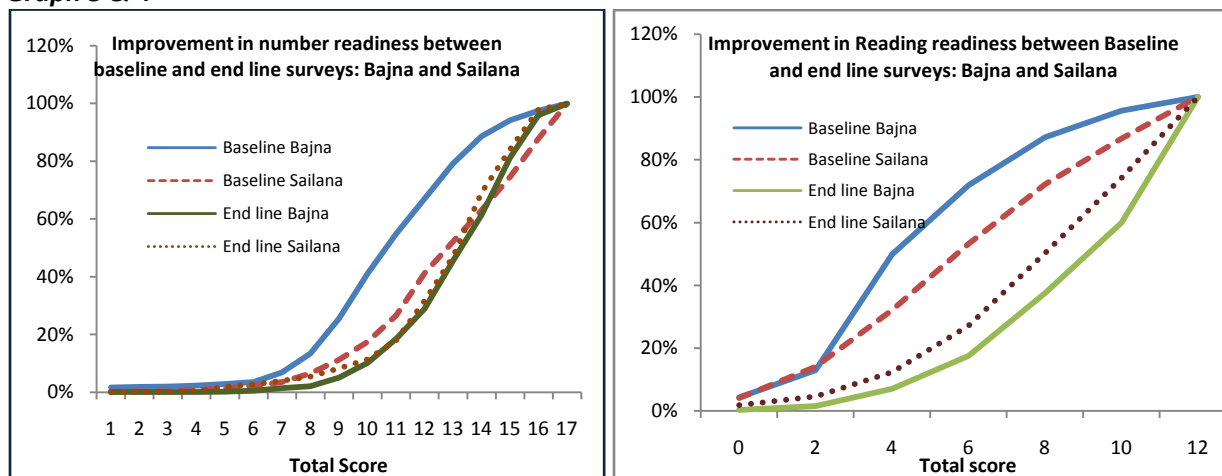
An analysis of competency wise gains attained in Bajna and Sailana in preparing 5 year old kids for schools show that gains in mean score for school readiness were significantly more in Bajna, though children in Sailana gained more when it came to figure and sound recognition. In terms of overall school readiness, the gains in Bajna were at least 2.7 times better than that in Sailana. The proportion of children who master the expected competencies has also increased in both blocks, with the gains in Bajna being 9% to 33% better than that of Sailana for various competencies.

| Table 11: Improvements in School readiness of children of 5 years age | | | | | | |
|---|--|------------------------|----------------|-----------------------|----------------|-----------------|
| | | BASELINE SURVEY | | ENDLINE SURVEY | | DID |
| | | BAJNA | SAILANA | BAJNA | SAILANA | Coeff |
| | Child confident to tell his / her name | 96.39% | 95.99% | 99.85% | 97.52% | 0.019* |
| | Child confident: parents name | 77.27% | 87.26% | 98.78% | 93.68% | 0.151*** |
| | Follow the instruction to touch "left ear with right hand" | 27.4% | 72.7% | 94.5% | 72.9% | 0.669*** |
| | Mean score | | | | | |
| 1 | Sentence comprehension | 58.62% | 67.47% | 82.32% | 79.55% | 0.232*** |
| 2 | visual perception | 44.41% | 51.39% | 75.91% | 69.27% | 0.272*** |
| 3 | Visual discrimination | 36.07% | 49.90% | 79.88% | 65.92% | 0.555*** |
| 4 | Number concepts | 58.45% | 78.31% | 62.50% | 64.81% | 0.351*** |
| 5 | Space Concepts | 67.13% | 79.60% | 84.53% | 82.22% | 0.295*** |
| 6 | Concept of "more"/ "less" | 51.28% | 62.64% | 67.99% | 67.66% | 0.233*** |
| 7 | Concept of "near"/ "far" | 30.65% | 59.82% | 52.59% | 55.39% | 0.527*** |
| 8 | Concept of "thick" / "thin" | 57.52% | 76.36% | 77.82% | 84.14% | 0.25*** |
| | Reading Readiness | 46.36% | 56.25% | 79.4% | 71.5% | 1.060*** |
| | Number readiness | 63.5% | 75.5% | 78.0% | 76.0% | 2.2346*** |
| A | Total score | 50.52% | 65.69% | 72.94% | 71.12% | 2.718*** |
| 9 | Concept of Classification 1 | 78.98% | 80.64% | 94.05% | 83.44% | 0.368*** |
| 10 | Concept of Classification 2 | 83.02% | 84.69% | 91.51% | 86.25% | 0.207*** |
| | Give words for letters | 7.75% | 11.15% | 12.80% | 17.60% | -0.027 |
| B | total score 2 | 54.57% | 65.39% | 72.89% | 70.09% | 3.267*** |
| | Figure recognition | 76.89% | 73.66% | 30.98% | 97.27% | -2.78*** |
| | Sound recognition | 47.81% | 19.73% | 25.46% | 64.50% | -2.68*** |
| | PERCENTAGE OF CHILDREN MASTERED THE CONCEPT | | | | | |
| | Sentence comprehension | 30.19 | 48.51 | 70.58 | 65.8 | 0.231*** |
| | visual perception | 12.94 | 28.16 | 61.74 | 53.04 | 0.239*** |
| | Visual discrimination | 23.78 | 36.49 | 71.04 | 49.81 | 0.339*** |
| | Number concepts | 40.56 | 63.51 | 39.48 | 37.05 | 0.253*** |
| | Space Concepts | 40.79 | 65.67 | 72.41 | 72.61 | 0.246*** |
| | Concept of "more"/ "less" | 28.9 | 48 | 46.95 | 45.6 | 0.204*** |
| | Concept of "near"/ "far" | 20.4 | 47.58 | 19.97 | 37.79 | 0.0936** |
| | Concept of "thick" / "thin" | 39.74 | 62.08 | 61.59 | 74.6 | 0.093*** |
| | Reading readiness | 4.43 | 13.26 | 40.1 | 25.8 | |
| | Number readiness | 2.45 | 12.13 | 3.96 | 1.98 | |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | | |

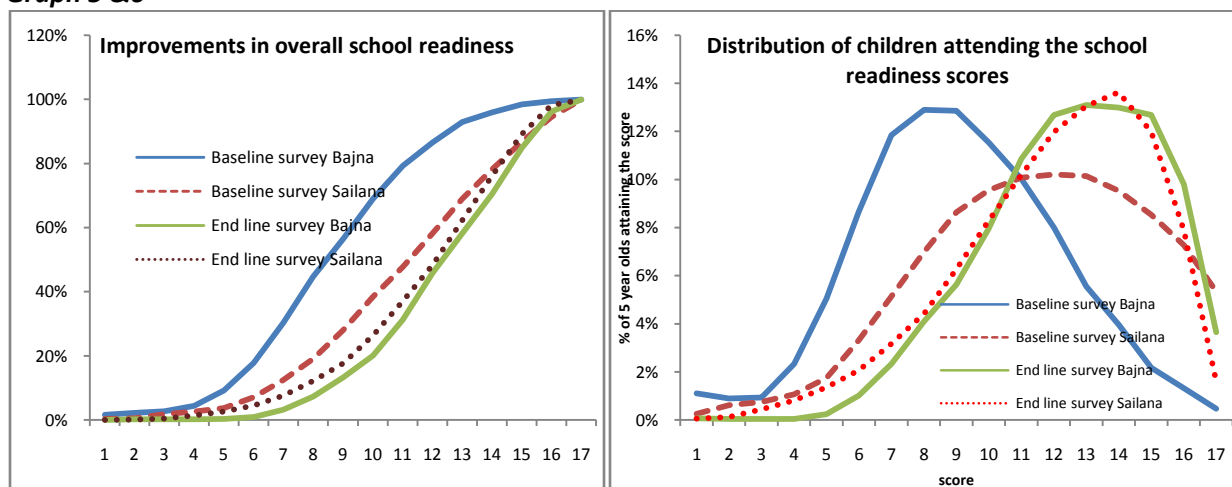
Graphs 3-6 show the improvements in school readiness as evident from base line and end line surveys graphically. The graphs 3-5 represent the cumulative percentage of children who have acquired

increasing scores. The lines that are more spread towards left have higher proportion of children who scored very poorly, and the graphs that spread more towards right side indicate higher proportion of children scoring more marks. All the graphs show the baseline results of Bajna lower than that of Sailana, but by end line, proportionately more children in Bajna mastering more skills than in Sailana. Graph 6 shows the shifts in distribution of baseline and end line survey scores.

Graph 3 & 4



Graph 5 & 6



Parental interest in pre-school education: The improvement in children’s attendance to anganwadi centres and schools (and proportionately better gains in this in the intervention block, Bajna) is clearly an indication of how parental demand for pre-school and school education is improving, and also, better service provisions. Even how children are sent to anganwadi centres / schools also shows tremendous improvements. For example, we looked at how neat and clean were the children attending anganwadi centres. During baseline survey, it was observed that while parents were sending their children to AWC, they did not ensure that children were neat and clean, as evident from the fact that more than half of the children attending AWC did not look clean and neat (56% children in Bajna and 52% in Sailana). However, a similar measure during end line survey shows that 97% of children in Bajna looked neat and clean as compared to only 68% in Sailana. See table 12.

The base line survey also indicated that children were also not trained in hygienic practices required at this stage of development. In the AWCs in Bajna, only 15% of the children in 4-6 year age groups and attending pre-school reported that they washed hands before and after eating food, compared to 62% children in Sailana. The end line survey shows significant impact of the education campaigns carried out under “Bachpan” pilot, as almost all children in Bajna now reported washing hands before eating food (an improvement by 83 percentage points) as against only 81% in Sailana, whose change was only 13 percentage points.

| | BASELINE SURVEY | | ENDLINE SURVEY | | DID |
|---|-----------------|---------|----------------|---------|-----------|
| | BAJNA | SAILANA | BAJNA | SAILANA | Coeff |
| Child looks neat and clean | 55.83% | 52.11% | 96.65% | 68.03% | 0.2489*** |
| Children washing hands before eating food | 15.38% | 67.01% | 99.39% | 80.67% | 0.703*** |

Parental perception of whether any pre-school type ‘learning’ happens in the AWC also varied between baseline and end line surveys. The baseline survey indicates that around 56-57% parents in Bajna and Sailana were ignorant about whether any new learning for children happens at AWC. In Bajna, a third of those parents whose children were attending AWCs for pre-school were unaware of what type of pre-school activities takes place at AWCs. In Bajna, 1/4th of the parents whose children were attending pre-school believed that their children were learning some new things at the AWCs. However, a third of the parents whose children were attending pre-school in Bajna and 2/3rds of those parents in Sailana had no idea as to what were these “new teaching and learning” (which they believed is happening) were all about!!

However, by the time of end line survey, most of the parents were able to gauge how important it was to attend pre-school, or express the importance they assign to the pre-school activities provided in the anganwadi centres. For 73% parents in Bajna, mid day meal or supplementary food was very important as against only 31% parents in Sailana. Homely atmosphere in the AWC was important for 90% parents in Bajna as against only 40% parents who considered this as an important attribute they want AWCs to provide, or the current AWCs were providing. Better learning facilities – in terms of children able to learn drawing, counting, story-telling and narrating, and playing and amusement facilities were important to a majority of parents in Bajna (almost 70%) as against more than 70% parents considering these as not important in AWCs in Sailana block. Having an AWC closer home was important for parents in Bajna while it was not an important consideration for parents in Sailana. See table 13.

| | BAJNA | | | SAILANA | | |
|---------------------------------------|----------------|--------------------|---------------|----------------|--------------------|---------------|
| | Very important | Somewhat important | Not important | Very important | Somewhat important | Not important |
| Supplementary food | 73.34% | 24.79% | 1.87% | 31.35% | 50.24% | 18.41% |
| Homely atmosphere | 36.29% | 53.58% | 10.13% | 7.45% | 32.2% | 60.46% |
| Better learning facilities - drawing | 8.87% | 47.87% | 43.25% | 3.33% | 17.37% | 79.3% |
| Better learning facilities – counting | 13.5% | 61.15% | 25.35% | 1.82% | 22.1% | 76.1% |
| Sstory telling/narrating | 19.54% | 52.57% | 27.89% | 1.35% | 8.25% | 90.4% |
| Modern teaching practices | 8.13% | 43.10% | 48.77% | 4.57% | 24.71% | 70.7% |
| Playing/amusement facilities | 25.43% | 47.13% | 27.44% | 14.83% | 11.9% | 84.5% |
| Close to home | 52.24% | 35.37% | 12.4% | 5.95% | 17.1% | 77% |
| Lack of spending capacity | 18.1% | 53.4% | 28.6% | 3.01% | 11.2% | 85.8% |

During the baseline survey, it was found that around half of the households in Bajna and around 41% in Sailana were happy with the way AWC provided pre-school education in their area. This satisfaction level was higher among households whose children regularly attended pre-school. By the time of end line survey, parents could articulate the degree of satisfaction with the services provided at AWC. See table 14 for details.

Table 14: Parental opinion about AWC provision as evident from end line survey

| | Bajna | | | Sailana | | |
|-------------------------------|------------------|---------|------------------|------------------|---------|------------------|
| | Good / very good | Average | Not satisfactory | Good / very good | Average | Not satisfactory |
| Individual attention to child | 48.02% | 33.42% | 21.6% | 41.1% | 37.7% | 23.5% |
| AWW are well-trained | 25.56% | 39.9% | 34.5% | 10.10% | 36.1% | 53.8% |
| AWW adequately qualified | 18.14% | 45.3% | 36.5% | 6.99% | 28.6% | 64.1% |
| Cleanliness of AWC | 51.5% | 26.02% | 21.5% | 34.9% | 35.4% | 48.1% |
| Quality of food | 67% | 20.1% | 12.6% | 28% | 39.56% | 32.4% |

The surveys also attempted to find out more about the households' concern about the way the AWCs were functioning. Baseline survey found that 96% of households in Bajna and 98% of the households in Sailana could not articulate an issue that they thought was a cause for concern and hence needed attention. This could have been the result of lack of awareness about their entitlements, and what was expected out of a pre-school education. However, the small proportion of households who could express their concern talked about issues such as (a) no proper pre-school education happening; (b) inadequacy of supplementary nutrition, (c) irregular functioning of the Centre, (d) anganwadi worker (AWW) who is irregular and not interested in activities, and (e) lack of facilities. Some responses were indeed candid "AWW not literate... What will she teach?", "Children are not allowed to play with toys, what will they learn?"

As a result of their lack of knowledge about issues in the functioning of AWCs and provision of pre-school education there, 98% of the households in Bajna and 95% in Sailana had no suggestion to improve the functioning of AWC during the base line survey. Those households who had suggestions recommended the appointment of skilled workers and regular provisioning of supplementary food. The suggestions include simple ones such as "AWW should visit homes more frequently", "Open AWC for more hours", etc to more insightful ones, such as "AWW should use learning materials like colors, charts etc to teach". However, any proposition to close down the AWC was not welcome among the households in Bajna and Sailana. Many people felt they would feel bad because such an action would affect health, education and nutrition of children in the area. We also tried to find out, during baseline survey, how often the parents interacted with the Anganwadi worker (AWW) for following up with their ward's health and education progress, or generally. Less than 10% of the households reported that they had regular interactions with the AWW. Even among households with children attending AWCs regularly, only around 15% of the households mentioned they had regular interactions with AWWs. Another 15% households with children attending pre-school in Bajna mentioned that they had occasional interactions with AWWs.

During end line survey, parents in Bajna reported that their wards spend on an average 160 minutes (2 hours 40 minutes) in AWCs while in Sailana, parents reported on an average 137 minutes (2 hours 17 minutes). This is an improvement from the time reported by parents during baseline survey (1 hour 40 minutes in Bajna and 1 hour 50 minutes in Sailana).

We also tried to find out how often did the parents interact with the Anganwadi worker (AWW) for following up with their ward's health and education progress, or generally. During baseline survey, less than 10% of the households reported that they had regular interactions with the AWW. Even among households with children attending AWCs regularly, only around 15% of the households mentioned they had regular interactions with AWWs. Another 15% households with children attending pre-school in Bajna mentioned that they had occasional interactions with AWWs. The end line survey reveals a change in this. However, the changes were not significantly different in Bajna and Sailana. See table 15.

| Interaction | BAJNA | | | SAILANA | | |
|---|--------|------------|------------|---------|------------|------------|
| | Rarely | Someti mes | Frequently | Rarely | Someti mes | Frequently |
| Regarding child's improvement and problems | 38.2% | 50.5% | 11.3% | 62.4% | 31.7% | 5.8% |
| Reg. quality of teaching | 36.82% | 46.5% | 16.7% | 43.36% | 45.3% | 11.4% |
| Reg. quality of food | 38.9% | 42.73% | 18.34% | 33.26% | 47.15% | 19.6% |
| Reg. problems created by other children | 31.73% | 52.8% | 15.5% | 43.27% | 31.6% | 25.1% |
| Reg. general problems of the <i>anganwadi</i> is facing | 32.36% | 53.8% | 12.8% | 47.9% | 26.6% | 25.4% |
| General discussion | 26.01% | 63.3% | 10.7% | 43.26% | 34.1% | 22.63% |

Summary: Sub-Stage 3

This stage is a critical period because the child moves out of house and interact with society at large from this stage onwards. Child's weight for age is a critical measure to gauge nutrition adequacy at this stage, and the socio-cognitive development in terms of school readiness. The analysis so far shows critical net gains in Bajna, especially in terms of attending to child's nutrition as well as pre-school learning requirements. The impact of reaching out to community as well as anganwadi workers to make them aware of the needs of the stage under project Bachpan have resulted in better child care practices and care.

Sub-Stage 4: Children in School - In pursuit of an unfinished agenda – “Happy Healthy Learning Child”

In this sub-stage, the main indicators that we use to examine the impact of the interventions are mainly related to schooling such as enrolment and attendance, learning outcomes and completion of primary schools. The analysis shows improvements in school participation and learning achievements, and the data available is limited to gauge the completion rates, especially in the context of continued migration and over-representation of over age children in lower grades.

| | Baseline | | End line | | DID |
|---|----------|---------|----------|---------|-----------|
| | Bajna | Sailana | Bajna | Sailana | |
| Out of School Children (OOSC) among 6-10 years old | 10.4% | 9.02% | 1.14% | 13.6% | -0.134*** |
| Child attended AWC before joining primary | 54.8% | 63.8% | 96.5% | 55.6% | 0.472*** |
| Enrolment in age appropriate grades | 65.86% | 68.95% | 74.19% | 72.55% | 0.047* |
| Attending school regularly | 89.6% | 90.98% | 98.86% | 86.45% | 0.14*** |
| Whether attended school the previous day | 83.9% | 72.1% | 95.6% | 86.2% | -0.04* |
| % of 10-11 years already completed primary | | | 43.35% | 31.53% | |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | | | | |

The results show that the percentage of children “out of school” has reduced tremendously in Bajna compared to an increase in Sailana, thus resulting in 13% more gains in Bajna compared to Sailana. Proportion of children who attended anganwadi for pre-school education has increased tremendously in Bajna compared to a decline in Sailana. Children attending school regularly has also increased significantly in both blocks. While analyzing results in this stage, one should keep various factors in the context: (a) Unlike the previous stages, where the development is seamless, in this stage, the status of school attendance depends quite a bit on the school calendar and the variance in terms of the time of survey; (b) there could be over age and under-age enrolments; (c) many children enter school by the age of five in the State as against the national norm of six years; and (d) attendance depends on various other factors, including migration.

The most significant indicator in this stage is the levels of learning outcomes. In order to assess the learning levels of the students, Class II students were tested using the tools prepared by the Madhya Pradesh Education Board designed on the basis of the formats prepared by the by the National Council for Education Research and Training (NCERT) for assessing the same for the DPEP districts. The tests were conducted at school level rather than at the household level. Students present are asked to take the test. Testing of children involved testing them for Language (Hindi) and Maths. The tools were mainly prepared to assess the learning levels of children as per the syllabus of the Grade. As the children would be studying under the syllabus designed by the Madhya Pradesh Education Board these tools would be of the same level as their classes. The Hindi test requires the student to recognize the correct word with the corresponding picture. In the math test simple calculations are to be solved by the

student along with recognizing numbers. While designing the tests, it was expected that at least 80% of the children should be able to achieve 80% of the skills required.

The tests were of 25 minutes each. Initially the children were introduced to the team in an informal manner. Simple games were then played to make them feel comfortable. The children were then asked to answer the questionnaire; the teacher was present in the classroom but was not involved in testing. The analysis of data on outcomes is done at two levels: (a) mean learning levels (b) Percentage of students with different levels of learning achievements.

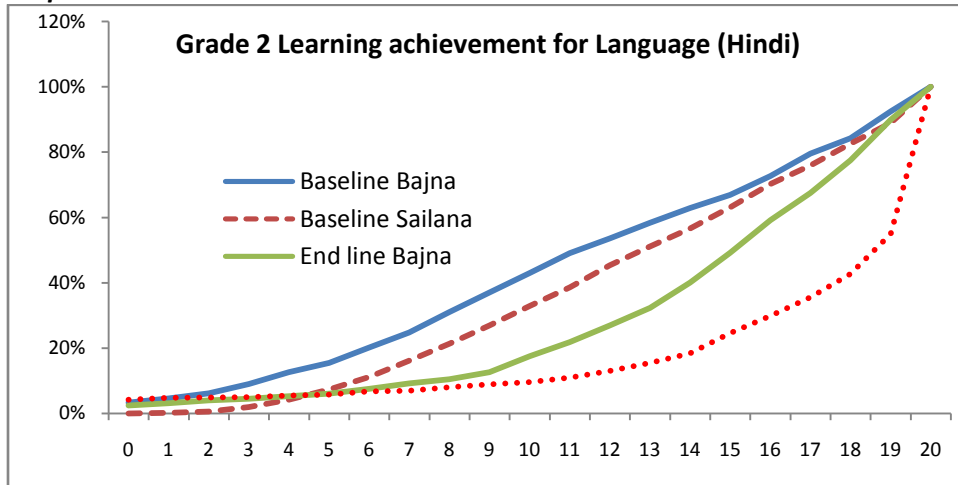
Mean learning achievement levels: The analysis shows how mean learning levels of grade 2 children in both Bajna and Sailana improved between baseline and end line survey period. See table 17.

| | | | Baseline | | | | End line | | | |
|---------|-------|---------|----------|------------|--------------|----------------|----------|------------|--------------|----------------|
| | | | Obs. | Mean score | % mean score | Std. Deviation | Obs. | Mean score | % mean score | Std. Deviation |
| Bajna | Total | Overall | 873 | 22.06 | 55.15% | 10.5 | 871 | 29.4 | 73.50% | 8.08 |
| | | Boys | 429 | 22.63 | 56.58% | 10.55 | 437 | 29.95 | 74.88% | 7.41 |
| | | Girls | 444 | 21.53 | 53.83% | 10.44 | 434 | 28.84 | 72.10% | 8.68 |
| | Hindi | Overall | 873 | 11.73 | 58.65% | 5.68 | 871 | 14.53 | 72.65% | 4.76 |
| | | Boys | 429 | 12.02 | 60.10% | 5.6 | 437 | 14.79 | 73.95% | 4.5 |
| | | Girls | 444 | 11.44 | 57.20% | 5.75 | 434 | 14.28 | 71.40% | 4.9 |
| | Math | Overall | 873 | 10.33 | 51.65% | 6.48 | 871 | 14.86 | 74.30% | 4.35 |
| | | Boys | 429 | 10.6 | 53.00% | 6.57 | 437 | 15.16 | 75.80% | 3.9 |
| | | Girls | 444 | 10.01 | 50.05% | 6.39 | 434 | 14.56 | 72.80% | 4.71 |
| Sailana | Total | Overall | 871 | 21.85 | 54.63% | 8.84 | 874 | 29.05 | 72.63% | 8.48 |
| | | Boys | 495 | 26.43 | 66.08% | 8.87 | 442 | 29.24 | 73.10% | 8.12 |
| | | Girls | 376 | 25.09 | 62.73% | 8.76 | 432 | 28.86 | 72.15% | 8.8 |
| | Hindi | Overall | 871 | 13.04 | 65.20% | 4.91 | 874 | 16.83 | 84.15% | 5.01 |
| | | Boys | 495 | 13.08 | 65.40% | 4.89 | 442 | 17.04 | 85.20% | 4.82 |
| | | Girls | 376 | 13 | 65.00% | 4.9 | 432 | 16.62 | 83.10% | 5.2 |
| | Math | Overall | 871 | 12.88 | 64.40% | 5.64 | 874 | 12.21 | 61.05% | 4.58 |
| | | Boys | 495 | 13.34 | 66.70% | 5.56 | 442 | 12.2 | 61.00% | 4.54 |
| | | Girls | 376 | 12.09 | 60.45% | 5.69 | 432 | 12.22 | 61.10% | 4.6 |

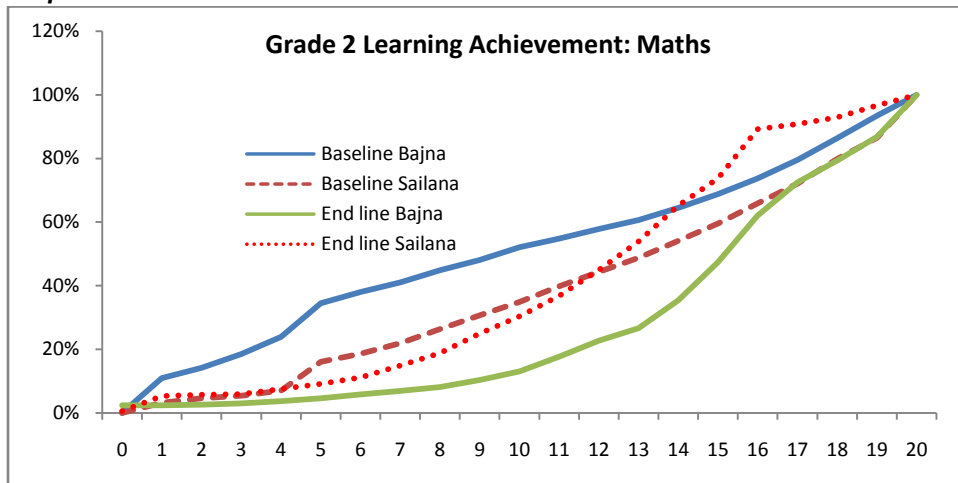
Proportion of children with learning outcomes: Graphs 7-9 shows the increases in the proportion of children achieving better learning outcomes in 2009 compared to 2005-06, and more so in Bajna than in Sailana, especially for Maths.

As indicated in the graphs, the proportion of children achieving higher learning outcomes have increased between baseline and end line survey period, and more so in Bajna compared to Sailana, especially in the case of Maths. In Hindi test, the increase in the proportion of children scoring more than 60% correct is better in Bajna, the increase in the proportion of children scoring more than 70% is more in Sailana.

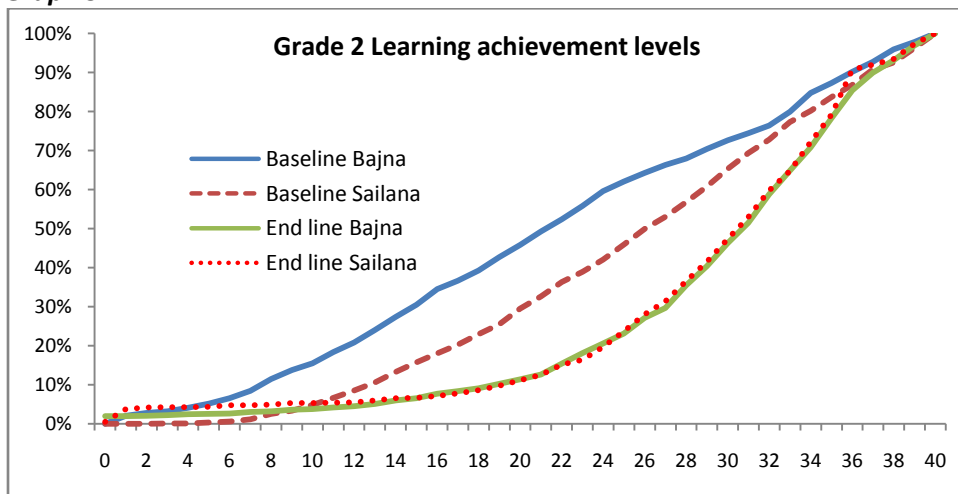
Graph 7



Graph 8



Graph 9



Most interesting is the increase in the coefficients showing “difference in difference” or, the difference in the improvements between experimental and comparison groups, both in Maths test and in overall scores. The extent of difference in relative gains also improves systematically till 70%, and then it comes down.

| | HINDI | | | | | MATHS | | | | |
|------------|----------|---------|---------|---------|----------|----------|---------|----------|---------|-----------|
| | BASELINE | | ENDLINE | | DID | BASELINE | | END LINE | | DID |
| | Bajna | Sailana | Bajna | Sailana | | Bajna | Sailana | Bajna | Sailana | |
| >=10% | 95.4% | 99.8% | 96.9% | 95.2% | 0.061*** | 89.0% | 96.8% | 97.6% | 94.7% | 0.107*** |
| >=20% | 90.95% | 98.1% | 95.5% | 94.97% | 0.077*** | 81.4% | 94.6% | 97.01% | 94.1% | 0.164*** |
| >=30% | 84.54% | 92.7% | 93.9% | 94.1% | 0.081*** | 65.5% | 83.9% | 95.4% | 90.8% | 0.235*** |
| >=40% | 75.1% | 83.8% | 90.8% | 93.02% | 0.070** | 58.9% | 78.1% | 93.1% | 85.13% | 0.277*** |
| >=50% | 63.0% | 73.2% | 87.4% | 91.1% | 0.079** | 51.9% | 69.4% | 89.7% | 75.1% | 0.332*** |
| >=60% | 50.9% | 61.4% | 78.2% | 89.0% | 0.017 | 45.1% | 60.2% | 82.3% | 63.2% | 0.3596*** |
| >=70% | 41.6% | 48.9% | 67.7% | 84.6% | -0.070* | 39.3% | 51.2% | 73.4% | 46.1% | 0.407*** |
| >=80% | 33.10% | 37.0% | 50.9% | 75.4% | -0.18*** | 31.1% | 40.4% | 52.6% | 26.3% | 0.376*** |
| >=90% | 20.5% | 24.1% | 32.5% | 64.4% | -0.26*** | 20.4% | 28.0% | 27.4% | 9.2% | 0.268*** |
| 100% | 7.6% | 11.02% | 10.1% | 45.1% | -0.30*** | 6.5% | 13.4% | 13.2% | 3.3% | 0.172*** |
| Mean score | 58.66% | 65.23% | 72.66% | 84.19% | -0.74* | 51.68% | 64.0% | 74.3% | 61.1% | 5.31*** |

indicates significance at 0.01 confidence level; ** indicates significance at 0.05 level; * indicates significance at 0.001 level*

| | Total Score | | | | |
|------------|-------------|---------|---------|---------|--------------------------------|
| | BASELINE | | ENDLINE | | Difference in Difference Coeff |
| | Bajna | Sailana | Bajna | Sailana | |
| >=10% | 96.79% | 99.89% | 97.82% | 95.77% | 0.051*** |
| >=20% | 91.52% | 98.85% | 97.01% | 95.31% | 0.091*** |
| >=30% | 81.67% | 93.34% | 95.87% | 94.62% | 0.132*** |
| >=40% | 69.53% | 84.27% | 93.46% | 93.36% | 0.156*** |
| >=50% | 57.27% | 74.51% | 89.78% | 90.27% | 0.179*** |
| >=60% | 44.22% | 61.08% | 81.86% | 83.64% | 0.166*** |
| >=70% | 33.68% | 46.96% | 70.38% | 68.65% | 0.171*** |
| >=80% | 25.54% | 30.65% | 48.56% | 47.03% | 0.094** |
| >=90% | 12.71% | 16.30% | 21.70% | 20.82% | 0.064* |
| 100% | 2.18% | 3.79% | 3.10% | 2.75% | 0.023* |
| Mean score | 55.2% | 64.6% | 73.5% | 72.6% | 4.56*** |

indicates significance at 0.01 confidence level; ** indicates significance at 0.05 level; * indicates significance at 0.001 level*

We also looked at the extent of improvements in both blocks between baseline and end line surveys separately for boys and girls. Interestingly, the differences in gains were much bigger in the case of boys than that of girls.

| | BOYS | | | | | GIRLS | | | | | Boys |
|-------|----------|---------|---------|---------|----------|----------|---------|----------|---------|----------|----------|
| | BASELINE | | ENDLINE | | DID | BASELINE | | END LINE | | DID | |
| | Bajna | Sailana | Bajna | Sailana | | Bajna | Sailana | Bajna | Sailana | | |
| >=10% | 97.90% | 100.0% | 99.54% | 96.61% | 0.050*** | 95.72% | 99.73% | 99.05% | 95.79% | 0.073*** | 0.019*** |
| >=20% | 93.01% | 98.59% | 98.40% | 95.93% | 0.08*** | 90.09 | 99.20 | 98.57 | 95.56 | 0.123*** | 0.016* |
| >=30% | 82.28% | 93.13% | 97.71% | 95.25% | 0.134*** | 81.08 | 93.62 | 96.91 | 94.86 | 0.151*** | 0.014 |
| >=40% | 70.86% | 85.86% | 93.82% | 94.34% | 0.151*** | 68.24 | 82.18 | 95.96 | 93.22 | 0.176*** | 0.022* |
| >=50% | 57.81% | 76.36% | 90.62% | 90.95% | 0.194*** | 56.76 | 72.07 | 91.69 | 90.42 | 0.180*** | 0.012 |
| >=60% | 45.92% | 63.23% | 83.52% | 83.48% | 0.191*** | 42.57 | 58.24 | 82.66 | 84.58 | 0.152*** | 0.028* |
| >=70% | 35.66% | 49.90% | 71.40% | 67.19% | 0.207*** | 31.76 | 43.09 | 71.50 | 70.79 | 0.140*** | 0.0240 |
| >=80% | 27.74% | 33.33% | 50.34% | 47.74% | 0.114** | 23.42 | 27.13 | 48.22 | 46.73 | 0.08** | 0.04* |
| >=90% | 14.92% | 18.38% | 22.20% | 21.27% | 0.07* | 10.59 | 13.56 | 21.85 | 20.56 | 0.052 | 0.027* |
| 100% | 2.56% | 4.65 % | 3.43% | 3.17% | 0.027 | 1.80 | 2.66 | 2.85 | 2.34 | 0.017 | 0.016* |

When it comes to looking at household practices, perceptions and impact on schooling, the main difference from previous stages of child development is mainly in terms of the specification of an academic calendar and grades that children need to progress through. Here we look at household behavior and practices more in terms of all types of provision of enabling conditions of schooling and learning.

In this section, the enabling conditions for education in the context of the two tribal blocks under study are examined in terms of (a) incentives of various types, (b) support at home for learning and home work; (c) Parental (and teachers') interest and follow up; and (d) receiving pre-school education before joining schools.

The major incentives for children for attending schools were related to Mid Day Meal (MDM) scheme, which was started with the aim of improving attendance of children in schools as well as to ensure at least one full nutritional meal to the children. During base line survey, around 91% of households whose children were enrolled in schools reported that their wards were receiving MDM. The end line survey shows that 93% of parents in Bajna and 85% of parents in Saiana reporting that their children were receiving MDM from school. Another incentive for students is the provision of free text books. As per the schemes of SSA and state schemes, all children belonging to SC and ST communities are eligible to receive free text book. During the baseline survey, only around 4% (3% in Bajna and 5% in Sailana) of the children belonging to SC and ST communities reported that they did not receive free text books. Similarly, around 3% of the girls who were eligible to receive text books also reported not receiving free text books. Though majority of households reported that their children received text books in time (in June –July), around 1/5th of the households reported their children received text books at a later period. The end line survey shows almost all parents reporting receiving free text books, in spite of the survey being done around the time the academic year was starting.

There is a provision of health check up of the students by government doctors and a monthly visit by the ANM to the primary schools. During the base line survey, 45% of the households in Bajna and 50% of the households in Sailana reported that there were no such regular health checkups happening in school. A fourth of the households in Bajna and 36% in Sailana reported there were monthly health checkups in the school during the three months prior to the survey. Others reported occasional health checkups. By the time of end line survey, 71% of households in Bajna reported regular health checkups in school, as against only 53% in Sailana.

A **child learning at home** is an important factor facilitating better learning outcomes. Around 47% of the households in Bajna and 71% of the households in Sailana (where the child was attending the school) reported that their children spend some time at home for learning and homework. By the time of end

line survey, 60% parents in Bajna reported children were spending time at home for studies as against 72% in Sailana. Definitely, there were improvements in Bajna by 13 percentage points. There were no significant difference in this between boys and girls. However, parental literacy seems to be very important. In households with literate parents, 71% of the children engage in some learning activities at home, while in households with illiterate parents, only 52% children do engage in some learning exercise. This is much starker in Bajna where only 42% of the children from illiterate families engage in learning after school hours.

Another indicator related to the same is the **help provided at home for learning activities**. This could be either a family member helping the child with her/his learning activities or through providing private tuition facilities. The baseline survey results show that overall only 24% children (14% in Bajna and 38% in Sailana) who attend school receive some help at home for studies. Further, 48% of the students with literate parents receive some assistance for studies at home while only 18% of children with illiterate parents receive assistance for studies at home. The end line survey shows that in Bajna, more than 50% of children have support from someone at home all the time, while in Sailana, 31% children get such sustained support. Both baseline and end line surveys shows that only less than 2% of the students were getting private tuitions, and they pay on an average, a monthly tuition fee of Rs.52/- (baseline survey) and Rs.58/- (end line survey).

Parental interest and follow up: Parental interest in child's schooling and learning is reflected not only in following up with the child's studies at home, but also in demanding from teachers an assessment regarding their children's progress. Unfortunately, in a region which is pre-dominantly illiterate, this was expecting too much without educating and empowering parents. During the base line survey, it was found that only around 3% of the households/ parents ever asked the teachers about the information on children's progress. However, they mentioned that teachers reported to them about their ward's progress even otherwise. In Bajna, 54% of the parents reported that the schools provided their children's progress report, while in Sailana, around 46% of the parents reported the same. Similarly, 35% parents in Bajna and 31% in Sailana reported that they were informed about the performance of their child once (annually), which were more in the form of whether the child has been promoted to the next level. Only around 3% of the households reported that they received periodical information about their child's learning levels. However, most of the parents were under the impression that their children were making good progress in their studies and were happy with that. In Bajna, 86% of the parents, and in Sailana, 75% of the parents reported that they were happy with the progress children were making in learning at the schools. The end line survey shows improvements in parental demand for understanding child's progress in learning. 98% of parents in Bajna and 96% in Sailana reported knowing about their ward's progress.

Summary: Sub-stage 2

Though we did not have data to look at the completion rates and dropout rates, the analysis of school attendance and learning assessment scores gives important insight into the progress children in the project area are making. The test scores show significant improvements in Bajna, especially a high net gains in Maths learning levels in Grade 2, compared to students in Sailana.

Community / parental awareness and beliefs

The objectives of the interventions facilitated by the NGO in the treatment block (220 villages in Bajna) included (a) creating awareness on child development issues and needs; (b) strengthening linkages between different service providers; (c) strengthening linkages between service providers and community; (d) formation of village resource groups that brought convergence of concerns, ideas and plans regarding child development needs and service delivery modalities; (e) development of integrated village plans around the needs of children and advocate and lobby with local, block and district administration for provision and facilitation.

In this context, it is important to look at whether the interventions really changed the way community think and work on child development issues and related service delivery improvements. During the baseline survey, what came out strongly was household's and community's lack of awareness about what best is to be done for child care and development and a general apathy and indifference towards the health / education /AWC providers. The focus group discussions and process documentation in Bajna during end line survey period shows improved community awareness, child care practices and demand for better services. Focus group discussions in Sailana indicate the awareness of many people about the interventions that were happening in the neighboring villages in Bajna and desire to emulate some of the interventions, for which there were demands for facilitating agency (like the NGO supported facilitators in Bajna).

One of the first measures we used to understand the impact of the community based interventions were to ask people directly about the changes in service delivery. Using the "citizens' report cards" type of questions, during the end line survey, the households were asked whether the provision of services changed during the last three years. In both control (Sailana) and treatment (Bajna) blocks, households reported improvements, but the people who reported improvements in service delivery, especially significant improvements, were at least 5 times more in Bajna compared to Sailana.

| | AWC | | Health care | | Schooling | | Community mobilization | |
|-------------------------------|--------------|--------------|---------------|--------------|--------------|---------------|------------------------|---------------|
| | Bajna | Sailana | Bajna | Sailana | Bajna | Sailana | Bajna | Sailana |
| IMPROVED | 88.9% | 80.4% | 90.55% | 51.0% | 87.3% | 43.8% | 47.0% | 15.12% |
| <i>Improved significantly</i> | 35.5% | 7.2% | 18.3% | 2.5% | 25.6% | 2.6% | 5.3% | 1.0% |
| <i>Improved somewhat</i> | 53.4% | 73.2% | 72.25% | 48.5% | 61.7% | 41.2% | 41.7% | 14.12% |
| No change / worsened | 11.1% | 19.6% | 9.45% | 49.0% | 12.7% | 56.17% | 53.02% | 64.93% |

From the general impressions about the changes in service provision of three child related schemes and community mobilization, we tried to understand the community's awareness about the activities that the main intervention in the trial region tried to improve – the household's knowledge / awareness about child related census and planning, and what type of involvement they had in the process in the last one year. The analysis of community / households' awareness of child census /planning show that the percentage of households who were aware of the child census and planning have improved from 51% to 85% between baseline and end line survey period in Bajna (an increase by 35 percentage points), as compared to an increase by only 16 percentage points in Sailana. In Bajna, the percentage of households with knowledge about who conducts survey / census / planning and for what purpose the survey /planning were carried out had improved from just 10% to 86%. This improvement is better than the improvements in Sailana. While households who reported participation in school / AWC/ health

centre related committee's activities were around 2.8% during baseline survey in both blocks, the end line survey shows that in Bajna, more than half of the households now participate in the service delivery related discussions and activities, while in Sailana, only a little more than a fifth of the households still participated in school/ AWC/ health centre related activities. In Bajna, 52% households participated in health / education /nutrition related meetings just as parents / users, compared to just 21% in Saiana. Only 2.5% of the Sailana households reported having ever been part of a decision making forum in any of the committees, while in Bajna 7.6% households (14% of all households interviewed) reported being part of a decision making regarding health / education /nutrition related service delivery.

| Table 21: Awareness and Participation in health/education /AWC related activities | | | | |
|--|-----------------|----------------|-----------------|----------------|
| | Baseline | | End line | |
| | Bajna | Sailana | Bajna | Sailana |
| Is the HH aware of any child census /planning | 51.2% | 46% | 85.8% | 62% |
| Who conducts the survey | 10.3% | 30.9% | 85.6% | 62.5% |
| Have you participated in any school/AWC/ health committee activities | 2.87% | 2.8% | 52.9% | 22.56% |
| Participated in school committee | | | 24.19% | 15.98% |
| Participated in AWC committee | | | 43.9% | 11.8% |
| Participated in Health Centre committee | | | 10.36% | 1.24% |
| Participated in the committees as a user / parents | | | 51.54% | 21.9% |
| Participated in the committees as a member of community | | | 4.5% | 0.64% |
| Have role in decision making | 0.64% | 1.33% | 7.6% | 2.45% |
| Attended most of the meetings | 1.04% | 2.22% | 44.8% | 18.6% |
| Having a committee good for community | | | 73.9% | 63.5% |

What have learned from the project Bachpan?

The net gains accrued by Bajna vis a vis Sailana in child development outcomes / milestones identified for each sub-stage of child development is summarized in Table 22. It shows that keeping other things constant (such as the developments in both Bajna and Sailana in terms of improved road connectivity, electrification, introduction of other CSSs like National Rural Employment Guarantee Scheme (NREGS) etc), the improvements in child development outcomes and practices were better in Bajna than in Sailana, and the one factor that Bajna had which Sailana did not have was the project “Bachpan”.

| Table 22: Summary of Outcomes: "Difference in difference" between treatment and comparison blocks | | |
|---|---|---|
| Indicators on Outcome for various stages | | Changes in treatment – changes in control (Coefficient) |
| Sub-stage 1 | Percentage of pregnant women who received full ante-natal check-up | 0.0346** |
| | Percentage pregnant women regularly received Supplementary food | 0.0980*** |
| | Percentage of deliveries assisted by institutionally trained | 0.358*** |
| | Percentage of children underweight | -0.129** |
| Sub-stage 2 | Percentage of children fully immunized by year 1 | 0.292*** |
| | Percentage of children who have completed all prophylaxis Vitamin A | 0.2439*** |
| | Percentage of children below appropriate weight for age | -0.0738*** |
| Sub-stage ¾ | Percentage of children entering in Grade 1 who have an adequate vocabulary in the school language | 3.267*** |
| | Percentage of Grade I children who have attended pre-school program | 0.472*** |
| | Achievement levels in language and Mathematics in Grade II | 4.56*** |
| <i>*indicates significance at 0.01 confidence level (statistically significant at least at 90% level) ; ** indicates significance at 0.05 level (statistically significant at least at 95% level); *** indicates significance at 0.001 level (statistically significant at 99% level)</i> | | |

Measuring the net gains in these outcomes was possible for a variety of reasons, which are listed below:

- While preparing the pilot, Government of Madhya Pradesh wanted the project to be piloted in tribal block, with its backwardness and marginalized community. In the opinion of the government, “if the pilot can demonstrate impact in these areas, the interventions of the pilot could work elsewhere for sure”. The project interventions were highly contextualized, and drawn from the experiences and opinion of the people there. Thus, it one of the reasons for the results is the contextualization of project interventions.
- The project and impact evaluation design took into account the experiences of previous such pilots, where mostly singular interventions were introduced and in the absence of support interventions, failed to generate any impact. In Bachpan, it was decided that the interventions is going to be a package, the main one being community information and forming village resource groups. However, whatever the village resource groups decided in terms of preparing village plans for children were considered as additional interventions. So the lesson is, it is not singular intervention, but interventions in package that is important in making impact. Here again, the lesson is not to plan interventions ring fenced in a project mode, but design interventions in much more programmatic approach, aimed at improvements in sectoral outcomes, than in project outcomes.

- The impact evaluation design did not rush in testing the results. There was a gap of three years between baseline and end line surveys; this ensured that the interventions had enough space and time to consolidate some of the outcomes. It also neutralized the impact that might have had resulted from initial energy and enthusiasm, especially in terms of process indicators.
- The logical results framework of the pilot allowed for measuring milestones in each stage of child's development rather than aiming at evaluating outcomes that is long term, and a result of various factors that are invisible perhaps in the context of interventions.

Lessons from the Pilot

The lessons or insights from the pilot are given in detail in Annex 4 (Process documentation). The two main take away lessons from the pilot is given below.

- Effective community mobilization and empowerment requires facilitation by catalysts and the “change agents” need to be picked up from the community itself. Training and capacity building is crucial for making them really the agents of change. Within the governmental system such areas do not have the leverage to ensure prompt government action on issues raised in the field. In such a situation the mediating role of the implementing NGO becomes critical to ensure that local issues receive the attention they need.
- While administratively different services may work in silos, the community or parents think more in terms of the “child development” rather than health, education and nutrition needs separately. To work effectively with community, a holistic, and convergent approach is better. Contextualization of interventions is important. For example, information, education and communication (IEC) of child development related messages should be in a manner and language identifiable to the community.