

# Nutrition of Adolescent Girls

## Findings from Community Monitoring within SABLA



### 1. Status of Nutrition and Anaemia among Adolescent Girls in India :



Indian adolescent girls face a great risk of nutritional problems, including anaemia and low Body Mass Index (BMI) (**See Box 1**). According to the NFHS-3 (2005-06) data, rural girls are more likely to have a low BMI than urban girls, 46% rural adolescents are thin compared to 39% urban adolescents. Almost half the girls with no education (or less than five years of schooling) are thin, compared to just over one-third of the girls who have had ten or more years of education. Unsurprisingly, more than half the girls from the poorest wealth quintiles are thin compared to just one-third of those in the highest quintile (Parasuraman *et al* 2009:80)<sup>i</sup>. Despite the variations, low BMI has serious implications, since many young women marry before age 20 and being underweight increases their risks during pregnancy.

Close to two-thirds of young women aged 15-24 who have never been to school (or have less than five years of schooling) are anaemic as compared to 48% young women with over ten years of education. Similarly two-thirds of the poorest young women are anaemic as compared to 47% young women from the highest wealth quintile (NFHS 3, 2005-06). Anaemia remains a gender issue: 30% boys are anaemic compared to 58% girls; even when barriers related to poverty, education and rural location are removed, and girls are far more anaemic compared to boys (**see Table 1 below**)

#### Box 1: Nutritional Status of Adolescent Girls in India

- India has the highest number (47%) of underweight adolescent girls aged 15-19 years in the world (UNICEF 2011: *State of the World's Children*)
- Over half of Indian girls aged 15–19 years (58%) are anaemic.

(Data Source - NFHS-3, 2005-06)

Table 1: Incidence of Anaemia among youth (data from NFHS-3)	Girls	Boys
Among poorest wealth quintile	65%	37%
Among youth with no education	64%	35%
Among rural youth	58%	28%
Among highest wealth quintile	47%	16%
Among youth with 10+ years of education	48%	17%
Among urban youth	52%	19%

Anaemia is of particular concern for adolescent girls since it is associated with an increased risk of premature delivery, perinatal mortality and low birth weight for children (*ibid*: 82). Anaemia is the main indirect cause of maternal mortality in India, which stands at 212 maternal deaths per 100,000 live births in 2007-09<sup>ii</sup>. Women with moderate anaemia may not be able to bear blood loss prior to or during labour and a substantial proportion of maternal deaths due to ante-partum and post-partum haemorrhage occur in women who suffer moderate levels of anaemia<sup>iii</sup> (Kalaivani 2009). If severe anaemia remains untreated in pregnant women, then it leads to pulmonary oedema and death (*ibid*)

It emerges quite clearly that low BMI and incidence of anaemia are higher among vulnerable adolescents from lower social and economic status, and that anaemia is also a gendered problem. Such nutritional deprivations continue throughout a woman's life cycle and are often passed on to the next generation. The Prime Minister of India noted that “the levels of under-nutrition continue to remain unacceptably high and the rates of reduction in under nutrition over time are disappointingly low; this is simply unacceptable.”<sup>iv</sup>

## 2. State response to the issue of malnutrition and anaemia among adolescent girls

Acknowledging that under-nutrition and iron deficiency anaemia is a serious nutritional deficiency adversely affecting vulnerable groups including adolescent girls in India, the government introduced the Nutrition Programme for Adolescent Girls (NPAG) as a pilot project in the year 2002-03 in 51 districts across the country. Under this programme, 6 kg of free food grains per beneficiary per month was given to underweight adolescent girls. This programme however did not have the desired impact.



Hence in 2010 the Government merged the NPAG with another scheme for adolescent girls called the *Kishori Shakti Yojna* (KSY) (which had been introduced in the 2000 by the Ministry of Women and Child Development, Government of India). Thus was created the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) – also called “SABLA”. According to the government order on the SABLA (GOI 2010), the Government of India recognizes that adolescence represents a window of opportunity to prepare for a healthy adult life<sup>v</sup>. It is also the period to shape and consolidate healthy eating and life style behaviours, thereby preventing the onset of nutrition related chronic diseases in womanhood and prevalence of malnutrition in the future generation.

The SABLA scheme provides for some entitlements to the adolescent girls through the ICDS system, such as distribution of supplementary nutrition (SNP), IFA tablets for preventing anaemia, quarterly *Kishori Diwas* at the Anganwadi centre (AWC) with regular weighing and height measurement to calculate BMI which is to be recorded in a *Kishori Health Card*, health check-up by the local nurse or doctor, and nutrition counselling. Under the SABLA, *Adolescent Girls with problems requiring specialized treatment will be referred to hospitals/PHCs/CHCs/ district hospitals. Medical officer would refer such cases with referral slip prescribed for the purpose.* (GOI 2010)<sup>vi</sup>

While appreciating the comprehensive intent of the SABLA scheme, SAHAYOG planned to intervene in its implementation to contribute to its overall objectives of adolescent girls' health and empowerment. This was called the “TARANG project”(2011 to 2013), in which SAHAYOG and its partners have mobilized 3071 adolescent girls in 100 Anganwadi-based groups called *Kishori Samuhs* to strengthen SABLA implementation, across five blocks of five districts (four in Uttar Pradesh and one in Uttarakhand). Each Kishori Samuh comprised a group of 15-25 adolescent girls who met a few times each month.

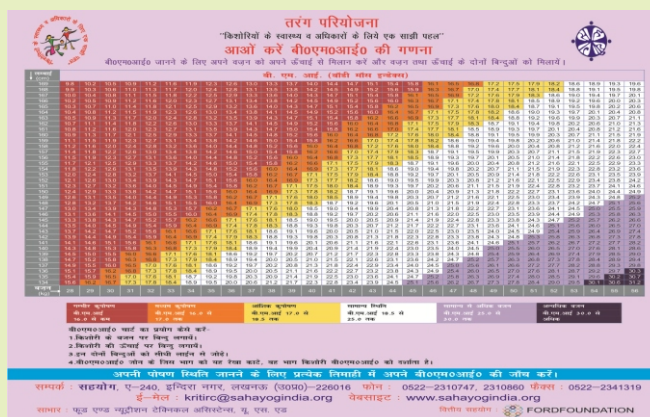
### 3. Methodology :

SAHAYOG's TARANG project seeks to contribute to the better implementation of the SABLA scheme through regular monitoring of the scheme by the adolescent girls themselves. Thus in the TARANG project, in order to enhance the participation of the adolescent girls in the implementation, monitoring and advocacy around the SABLA scheme, SAHAYOG developed a SABLA Monitoring Calendar. This Monitoring Calendar called “Chalo Aao Dekhe Kishori Swasthya Sewaen” (Evaluating Health Services for Adolescent Girls) was used by the adolescent girls to monitor their entitlements within the SABLA Scheme each month. The findings were compiled every quarter to plan necessary action towards improving service delivery. The services that were monitored included provisioning of supplementary nutrition and IFA to the girls, and organizing of the *Kishori Diwas*, among others.

In addition in order to enable the adolescent girls to record their BMI and keep track of their nutritional status, SAHAYOG conducted training programmes that built the capacity of 250 adolescent girls' group leaders (*Sakhis*) from 100 villages of the selected 5 districts to understand malnutrition and anaemia as well as skills to calculate body mass index (BMI) through the use of a BMI measuring chart (see picture)<sup>vii</sup>. The BMI chart enables adolescent girls to calculate their body mass index and estimate their nutritional status. The different colours in the chart indicated the extent of malnutrition and help identify girls suffering from mild, moderate and severe malnutrition.

Following the training from SAHAYOG, *Sakhis* with the help of the TARANG field supervisor started measuring the BMI of the adolescent girls coming to the AWC for three months from January to March 2013. The BMI of a total of 2793 girls (91% of the total group of 3071) was calculated across 5 districts of Banda, Chandauli, Lalitpur, Mirzapur in Uttar Pradesh, and Nainital in Uttarakhand. The final compilation of this data collected through using the BMI chart was done in the month of May 2013. The main findings from the BMI chart are given below.

**Limitations:** The BMI data presented here is limited in scope as it covers only 2793 girls across 5 districts (91% of the 3071 girls covered by the TARANG project). The BMI was measured by the *Sakhi* leaders supported by the TARANG field supervisors, both of whom had received training from SAHAYOG. The weighing was done in the Anganwadi Centres over a period of 3 months (January to March 2013) and calculations made using the BMI chart. The findings were compiled in the month of May 2013; this BMI data has not yet been shared with local officials in any of the 5 districts.



### 4. Findings from the SABLA Monitoring Calendar

#### Kishori Cards

The SABLA guidelines clearly spell out that during the quarterly *Kishori Diwas*, a health check up of all adolescent girls, should be undertaken by the ANM or medical officer and the height, weight measurement of the adolescent girls should be taken on this day. These BMI details are to be entered into individual *Kishori Cards* to keep a track of the milestones achieved. However, the data from the SABLA Monitoring Calendar in all the five districts during the period from October 2011 to June 2013 shows that no *Kishori Cards* were distributed to the girls.

### ***Kishori Diwas***

The data obtained from the SABLA Monitoring Calendar from October 2011 to June 2013 also shows that while the Anganwadi workers in Nainital have been very proactive in organizing the *Kishori Diwas*, in other districts of Uttar Pradesh no initiatives were taken by the Anganwadi worker to organize the *Kishori Diwas*. The exception is in Mirzapur district, UP, where eight out of 20 Anganwadi workers organized the *Kishori Diwas* during the months of April – June 2013.

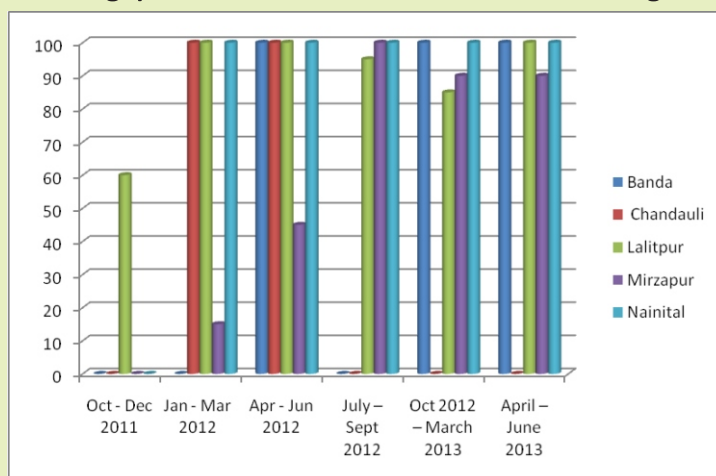
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### ***BMI Checking***

Moreover, a look at the data obtained from the monitoring calendar (see **Graph 1** below) shows that the weighing of the girls was not being done consistently although all the AWCs were provided with new digital weighing scales.

**Graph 1: Regularity of weighing in 100 AWC in 5 Districts across Oct 2011 – June 2012 (in Percentage) based on data from SABLA Monitoring Calendar**



The graph above reflects the data from the Monitoring Calendar which shows the percentage of AWCs in which weighing was being done across the five TARANG intervention districts. It is evident from the data that in Chandauli district (UP) initially the weighing was being done by the Anganwadi workers using the new digital machines that were provided to them under the SABLA Scheme. But from July 2012, 18 out of the 20 Anganwadi workers stopped weighing the girls, saying that the machines were not working<sup>viii</sup>.

Further even in the districts where height measurement and weighing of the girls was regularly done, the health check-ups have been limited to distribution of IFA tables and immunization. Nainital proved to be the exception where blood testing of the adolescent girls was being done during the *Kishori Diwas* to measure the haemoglobin level (to determine the levels of anaemia).

As none of the districts have received *Kishori Cards*, the height and weight of the adolescent girls is recorded in the AWW's registers but it is not used to calculate the BMI of the girls. Therefore there is no calculation of the extent of malnutrition, nor are severely malnourished girls identified. Hence is there proper tracking of whether nutritional status is improving or deteriorating.

The SABLA scheme directs that adolescent girls facing problems should be referred by the Medical officer/ANM to public health facilities for treatment. Although under the National Rural Health Mission, Nutrition Rehabilitation Centres (NRCs) have been set up to address severe under-nutrition and underlying complications<sup>ix</sup>, these are currently designed to cater only to severe acute malnourished (SAM) children under five years of age. Therefore, in order to address the problem of severe malnutrition in adolescent girls, the SABLA should have special provisions for giving such girls diverse cooked meals that provide them with at least 3000 calories a day, which include an egg or soya beans, as is done in Andhra Pradesh. Further in all the 5 districts since there was no identification of the extent of malnutrition among the adolescent girls, the AWWs along with the ASHAs did not counsel the parents to provide extra nutrition to these girls as directed by the SABLA guidelines.

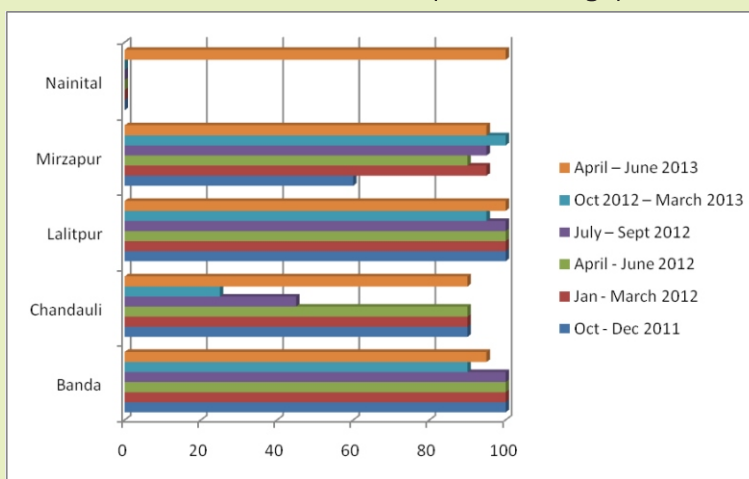
**Distribution of Supplementary Nutrition and IFA tablets:**

The data compiled from the Monitoring Calendar for nine months from July 2012 to March 2013 shows that the availability of supplementary nutrition in the 3 districts of Uttar Pradesh was consistent, with the exception of Chandauli district (see **Graph 2**).

In Nainital (Uttarakhand) on the other hand, the Anganwadi worker expressed her inability to distribute supplementary nutrition from July 2012 to Feb 2013 (8 months) because she said no supplies had been sent to her from the district office<sup>x</sup>. However things have improved greatly and from April 2013, the distribution of supplementary nutrition has become regular in Nainital as well.

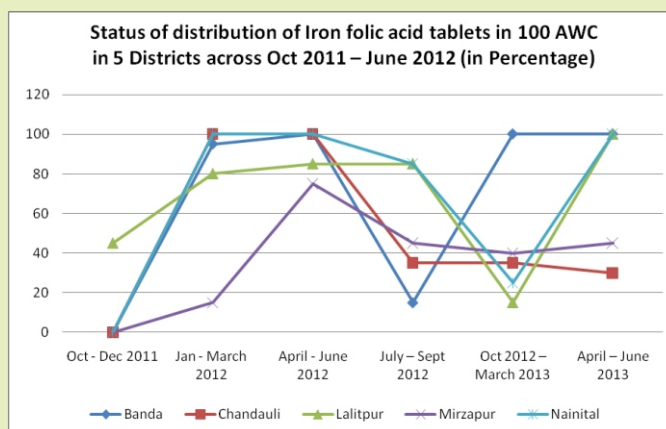
In order to tackle the problem of anaemia<sup>xi</sup> under the SABLA, adolescent girls are entitled to receive 100 IFA adult tablets for supervised consumption during the *Kishori Diwas*. Provisions have also been made under this scheme for states/UTs to procure these supplements under SABLA if the Health Department is unable to do so. The following table (**Graph 3**) shows the data from the SABLA Monitoring Calendar on the distribution of IFA tablets.

**Graph 2: Status of Distribution of Supplementary Nutrition in 100 AWC in 5 Districts across Oct 2011 – June 2012 (in Percentage)**



The data shows that from July 2012 to June 2013, Chandauli district has fared poorly with IFA tablets not being distributed everywhere. The local ANM stated that she was helpless as there were no stocks of iron folic acid tablets available and this was reaffirmed by the Medical Superintendent of the CHC. The ICDS department in UP in Chandauli district was also not procuring the tablets although as pointed out earlier there is a clause in the SABLA scheme which enables them to do<sup>xii</sup>. Nainital on the other hand has been taking a very proactive role in this regard and the ASHA and the ANM have been distributing IFA tables and more stocks have been procured by ICDS department under the SABLA scheme

**Graph 3: Percentage of Anganwadi Centres distributing IFA tablets**



**Box 2 Status of Nutrition among Adolescent girls in the AWC in 5 districts**

- Total number of girls whose BMI was measured in the AWC: 2793
- 37.2% of girls surveyed (1040) were suffering from malnutrition
  - ✓ Of these 1040 malnourished girls, 688 (66%) were cases of mild to moderate malnutrition
  - ✓ Of these 1040 malnourished girls, 352 (34%) were cases of severe malnutrition

## 5. Findings from the BMI chart

Of the 3071 adolescent girls in the TARANG intervention areas, the BMI of 2793 (91%) was calculated using the BMI Monitoring Chart. The data shows (See box 2) that of the girls surveyed, 37.2% were malnourished, which is lower than the all-India average of 47% in NFHS-3. On disaggregating this further it was found that 66.2% of these malnourished girls were suffering from mild to moderate malnutrition and 33.9% were suffering from severe malnutrition.

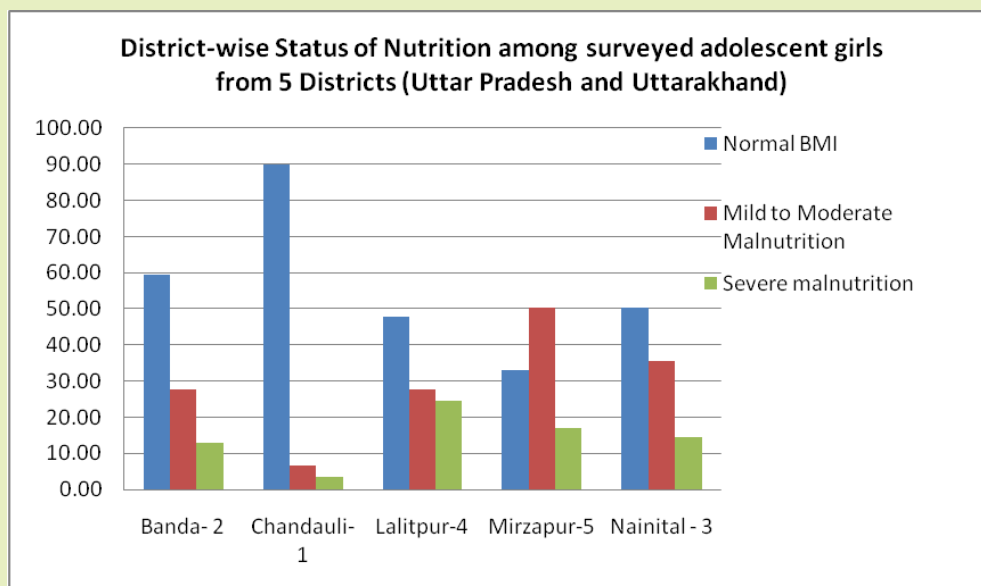
### District-wise findings on malnutrition



A district-wise analysis of the data (see Graph 4) shows comparative patterns of prevalence of malnutrition among surveyed adolescent girls in the 5 districts. The data from the BMI chart shows that adolescent girls of Chandauli district had the lowest levels of mild to moderate malnutrition among the surveyed girls at 7%. In contrast about half the girls (50.2%) in Mirzapur have mild to moderate malnutrition. Districts of Banda and Lalitpur, both in the Bundelkhand region, show 28% of mild to moderate malnutrition among the girls, while in Nainital (Uttarakhand) mild to moderate malnutrition among the surveyed girls was found to be 35%.

However when we examine the data for severe malnutrition, we find that Lalitpur has the highest number of girls who severely malnourished girls with one in every four girls surveyed being severely malnourished. The situation in Mirzapur is also serious with 17% of the surveyed girls suffering from severe malnutrition. Nainital and Banda come close with 14% and 13% girls recorded as severely malnourished.

**Graph 4: Status of Nutrition among surveyed adolescent girls from 5 Districts**



## 6. Conclusion :

The SABLA scheme was launched with the objective of correcting nutritional problems of adolescent girls by detecting them early in life. It was visualized that this could be achieved not only by continuing with the traditional method of provision of supplementary nutrition and distribution of IFA tablets, but also through initiating special measures such as measuring the BMI of adolescent girls to enable a close monitoring of their growth. It was envisaged that this would enable an early detection of cases of mild, moderate and severe malnutrition and enable corrective measure to be initiated.

However data collected by the girls through the use of the monitoring calendar and the BMI charts has shown that although to some extent traditional methods are in place (distribution of supplementary nutrition and IFA tablets), the new measures are yet to take off and benefit the large number of anaemic and malnourished adolescent girls in these 100 Anganwadi centres. So far even the BMI tracking cards have not been made available, and neither is systematic weighing being taken at all AWC.

At the same time, this exercise of checking BMI among the 2793 girls in Jan-March 2013 carried out by the adolescent girls indicates the extent of malnutrition that is worrisome at close to 40%. The extent of severe malnutrition needs to be more closely examined as this one-time survey shows it to be as 13%. Without tracking the BMI changes through the *Kishori* Cards, it is not possible to refer adolescent girls suffering from severe malnutrition for nutrition rehabilitation.



## Recommendations:

1. Ensure that *Kishori* Cards are made available everywhere
2. Provide training on an urgent basis to all AWW, ANMs on the importance of BMI as an indicator of growth and how to calculate it
3. Encourage AWW and ANMs to identify severely malnourished girls and refer them for nutrition rehabilitation
4. In order to address the problem of severe malnutrition in adolescent girls, make special provisions for providing such girls with diverse cooked meals providing at least 3000 calories a day, which include an egg or soya beans.
5. Provide additional resources to families of the adolescent girls suffering from moderate and severe malnutrition
6. Train and motivate AWW and ANM to provide counselling to the families of adolescent girls suffering from any form of malnutrition.
7. Ensure that safe potable water and sanitation facilities are available in every hamlet, as these are critical to child development and reduction of chronic malnutrition.

## End Notes

- i Parasuraman S., Kishor S., Singh S. K., and Vaidehi Y. 2009. *A Profile of Youth in India. National Family Health Survey (NFHS-3), India, 2005-06*. Mumbai: International Institute for Population Sciences; Calverton, Maryland, USA: ICF Macro.
- ii Sample Registration System (2009): Special Bulletin On Maternal Mortality In India - 2004-06 , Office Of Registrar General, Ministry of Home Affairs, Government of India, [http://censusindia.gov.in/Vital\\_Statistics/SRS\\_Bulletins/MMR-Bulletin-April 2009.pdf](http://censusindia.gov.in/Vital_Statistics/SRS_Bulletins/MMR-Bulletin-April 2009.pdf)
- iii Kalaivani, K (2009): *Prevalence & Consequences of Anaemia in Pregnancy*, Indian Journal of Medical Research, Vol. 130, November, pp 627-633
- iv Record of Discussions at the First Meeting of Prime Minister's National Council on India's Nutrition Challenges held on 24.11.2010
- v No.6-12/2010-RGSEAG, Government of India, Ministry of Women and Child Development, Dated 27.9.2010, pg. 1
- vi *ibid*: pg. 12
- vii This chart was developed by SAHAYOG after being adapted from the one developed by USAID
- viii Following the transfer of the proactive DPO and CDPO in July 2012, besides irregularities in the distribution of supplementary nutrition and IFA tables, the weighing of girls also stopped between July 2012 and March 2013 in all the 20 centres
- ix Nineteen NRCs have been set up in Uttar Pradesh under the NRHM, however there are no centres located in the state of Uttarakhand (Release ID :83138, More information on this is available at: <http://www.pib.nic.in/newsite/erelease.aspx?relid=83138>)
- x Official records also show that from April 2011- March 2012 there were no allocations by the Central Government to Uttarakhand for the nutritional component under SABLA. However for April 2012-March 13 financial year (F.No. 6-33/2012-RGSEAG Vol.II, dated 6<sup>th</sup> July 2012), a total amount of 1422 MT of wheat per quarter was allocated to Uttarakhand; yet the state government failed to distribute 70% of the allocated amount. Therefore in the last quarter of that financial year (Jan – March 2013) there was no allocation of food grains.
- xi According to a UNICEF report in India over half of girls aged 15-19 (56 per cent) are anaemic (2011: State of the World's Children, [http://www.unicef.org/adolescence/files/SOWC\\_2011\\_Main\\_Report\\_EN\\_02242011.pdf](http://www.unicef.org/adolescence/files/SOWC_2011_Main_Report_EN_02242011.pdf))
- xii The DPO and the CDPO posted during the initial period (Oct 2011 to June 2012) were proactively involved in the implementation of the SABLA. However both of them got transferred around July 2012 and following their transfers, the implementation of the SABLA scheme was adversely affected.

## Acknowledgements:

- i. TARANG partners: *Tarun Vikas Sansthan* (Banda), *Gramya Sansthan* (Chandauli), *Bundelkhand Development Foundation* (Lalitpur), *Shikhar Prashikshan Sansthan* (Mirzapur), *Vimarsh Sansthan* (Nainital)
- ii. Project Advisory Group Members
- iii. Right to Food Campaign
- iv. FORD Foundation for generously supporting the TARANG intervention



### SAHAYOG's mission:

To promote gender equality and women's health from a human rights framework by strengthening partnership-based advocacy



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