Pooled Factsheet of 5 Nutrition Surveys in India

Standardized Monitoring and Assessment of Relief and Transitions (SMART) Survey for Nutrition, Food Security and WASH

- Khuntpani block, Jharkhand
- Nabarangpur and Koraput district, Odisha
- Kesla block, Madhya Pradesh
- Naraini block, Uttar Pradesh

KEY RESULTS | 2016-17

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SUMMARY

Background

The fourth round of National Family Health Survey in 2015-16 indicated that 21 percent of children under 5 years of age in India had wasting (having low weight for height, below -2 standard deviations, based on the World Health Organization standard) of which 7.5 percent had severe wasting. High prevalence of wasting or acute malnutrition across states necessitated the need for implementing a comprehensive community-based management of children with acute malnutrition.

Currently, the Government of India and state governments with the technical support of UNICEF are providing quality care for children with Severe Acute Malnutrition (SAM) through 1151 Nutrition Rehabilitation Centres (NRC) across the country. However, even in the best circumstances, neither NRCs can handle the entire case load of the children at district/state level nor do all the children with SAM require facility-based care. Besides, there are common barriers related to distance, high opportunity cost, the responsibility of other children/family members that prevent families to access and seek care at NRC for their children.

A comprehensive community-based approach for management of Severe Acute Malnutrition (CSAM) has made effective treatment possible for SAM cases without medical complications in the community, near their homes. CSAM approach envisages early detection, referral and effective treatment of children with SAM. Further, it is designed to achieve greatest possible coverage by making services accessible to the most vulnerable children in their community itself.

The state governments were keen to demonstrate comprehensive CSAM at a block or district level and learn from this demonstration programme what is required to deliver CSAM services in a sustainable, efficient, cost-effective, and integrated manner that builds upon existing government systems and infrastructure.

National level surveys like National Family Health Survey (NFHS) do not provide data on nutritional status of children at the block level. Nutrition survey based on SMART methodology helps to estimate the prevalence of acute malnutrition which set the baseline indicator for the programme.

Rationale

The state governments in partnership with UNICEF planned to demonstrate and roll out Comprehensive Community-based programme for management of children with Severe Acute Malnutrition (CSAM) programme, which aimed to strengthen both treatment and prevention of children with SAM. SMART survey estimates the prevalence of

Community-based management of Severe Acute Malnutrition (CSAM) has made effective treatment possible for SAM cases without medical complications in the community, near their homes

wasting, stunting, and underweight among children aged 6-59 months in the districts. The results of the survey aid in estimation of the case load for effective programme planning and implementation. The survey findings would also support advocacy with the state for scale-up, as the findings of the block/district survey indicate high SAM prevalence.

The survey captures other determinants like Infant and Young Child Feeding (IYCF) practices, maternal nutritional status and household level indicators on food security, Water, Hygiene and Sanitation (WASH) that enriches contextual information for programmatic decisions. These findings guide policy makers in planning, designing and implementing an effective CSAM programme.

SMART survey aims to estimate nutritional status of children below 5 years and provide insights to design and implement an effective CSAM programme on field

About the SMART Survey

The Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology is an improved survey method to conduct nutrition surveys. The main objective of the survey is to estimate nutritional status of children under-five. However, in the surveys, additional indicators, such as IYCF practices, morbidity status, immunization coverage, household food security and WASH conditions were also captured to provide contextual information of the area.

The findings of the SMART survey are reliable, robust and aid policymakers in programming of comprehensive Community-based Management of children with severe malnutrition. For more details on globally accepted standardized methodology, please visit the link: *https://www.fantaproject.org/sites/default/files/resources/HFIAS_ENG_v3_Aug07.pdf*

The SMART methodology uses Probability Proportional to Size (PPS) method to identify clusters from the sampling frame i.e. list of Anganwadi center. Data was mainly analyzed using Emergency Nutrition

[A] Sample size of additional indicators was not calculated individually hence the findings are not representative of the population and must not be generalized. These indicators were captured to provide contextual information of the survey area.

Assessment (ENA) software for SMART (July 2015 version). However, Epi info version 3.5.4 was used for analysis of additional indicators like morbidity, IYCF, WASH, and food security.

Questionnaires

Pretested interview schedules based on SMART standardized tools were designed in line with the Indian context. The household food security was assessed using the 9 item Household Food Insecurity Access Scale (HFIAS) questionnaire developed by Food and Nutrition Technical Assistance (FANTA) project. For more details, visit the link: *http://www.fao.org/fileadmin/user_upload/eufao-fsi4dm/doc-training/hfias.pdf*.

All the questionnaires administered in the field are translated from English to the local language. The questionnaires are categorized into four sections: **Section 1:** Questionnaire includes anthropometry, diarrhoea prevalence and immunization coverage, utilization of mosquito nets, **Section 2:** Questionnaire on IYCF practices for children 0-23 months, **Section 3:** Questionnaire to assess food insecurity in the identified households and **Section 4:** Questionnaire to assess WASH practices in the area. Questionnaires were administered to mothers of the children selected for the survey.

Anthropometric Measurements

Nutritional status (height, weight, MUAC, bilateral pitting) of children under five years of age was assessed. Height using a standard wooden infant-cum-stadiometer, weight (to the nearest 100 g) using electronic weighing scale (SECA 874) and mid-upper arm circumference (MUAC) was measured on the left arm of children using a MUAC tape.

Survey Participants

Children between 6 to 59 months from the selected households were included for anthropometric survey. In addition, 0-5 months infants were included to estimate the prevalence of wasting. Mothers of all children 0-59 months from the selected households were also included for the anthropometric assessment and were interviewed as part of the survey.

The National Family Health Survey-4 indicated that 21 percent of children under 5 years of age had wasting

SMART Survey estimates wasting among 6-59 months for effective programme and implementation

Ethical Consideration

Written approval from the respective state government was taken before initiating the SMART survey. Written and verbal consent was taken from the village heads/frontline functionaries and participants before conducting the survey.

Training of Surveyors

Under the overall supervision of the survey manager, the nutrition surveys were conducted by the survey teams. Each team consisted of three members: main measurer cum team leader, assistant measurer and local coordinator. All team members were trained on SMART methodology and anthropometric measurements at the National Centre of Excellence (NCoE) for the management of acute malnutrition at Kalawati Saran Children's Hospital (KSCH), New Delhi.

Survey on Field

To implement CSAM programme, state government and UNICEF identified blocks/districts based on following three criteria: level of prevalence of wasting and underweight, presence of functional NRC in the district/block and distance of the block/district from the state's capital in order to ensure regular monitoring visits by the officials.

In the year 2016 and 2017, five SMART surveys were carried out in four states of India namely Jharkhand (1 block), Odisha (2 districts), Uttar Pradesh (1 block) and Madhya Pradesh (1 block) jointly with respective state government with support from UNICEF and KSCH.

- In **Jharkhand**, SMART survey was carried out in Khuntpani block of West Singhbhum district from 19-26 October 2016 and gathered information from 725 households, 398 children and 307 mothers.

- In **Odisha**, two SMART surveys at district level were carried out in Nabarangpur and Koraput. In Nabarangpur data was collected from 26 May-7 June 2017 and gathered information from 933 households, 537 children, and 430 mothers. In Koraput, data was collected from 29 May-10 June 2017 and gathered information from 948 households, 457 children, and 374 mothers.

- In **Uttar Pradesh**, the survey was conducted in Naraini block of Banda district from 1-7 July 2017 and gathered information from 855 households, 419 children and 309 their mothers.

- In **Madhya Pradesh**, the survey was carried out in Kesla block of Hoshangabad district from 10-18 August 2017 and gathered information from 1101 households, 504 children and 358 mothers.

Detailed report for each SMART Survey is also available separately.

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Indicators	Location of SMART survey		
	Kesla block in Madhya Pradesh	Khuntpani block in Jharkhand	Naraini block in Uttar Pradesh
ANTHROPOMETRIC PROFILE OF CHILDREN AGED 6-59 MONTHS	(n=504)	(n=398)	(n=419)
Acute Malnutrition (low weight for height, low MUAC and/or bilateral pitting edema) (6-59 months)			
Children with wasting (weight-for-height <-2 z-score) [1]	24.7	33.4	30.8
Children with severe wasting (weight-for-height<-3 z-score) [2]	3.8	7.3	6.0
Children with moderate wasting (weight-for-height <-2 z score and >= - 3 z-score, no edema) [3]	20.9	26.1	24.8
Children with MUAC [4] <125 mm	4.8	12.8	11.7
Children with MUAC <115 mm	0.0	2.8	3.3
Children with MUAC (<125 mm and >= 115 mm, no edema)	4.8	10.1	8.4
Children who are wasted with weight-for-height <-2 z-score and/or MUAC <125 mm	26.4	34.8	32.9
Children who are severely wasted with weight-for-height <-3 z-score and/ or MUAC< 115 mm	3.8	8.1	6.3
Children with bilateral pitting edema [5]	0.0	0.0	0.0
Children with severe acute malnutrition whose mother were severely wasted based on MUAC <210 mm	21.0	31.2	25.6
Children who are both stunted and wasted	12.5	27.4	22.4
Children who are both severely stunted and severely wasted	0.6	4.8	2.9
Stunting [6] (low height for age) (6-59 months)			
Children who are stunted (height-for-age <-2 z-score)	37.9	70.7	58.9
Children who are severely stunted (height-for-age <-3 z-score)	9.6	36.3	23.4
Children who are moderately stunted (<-2 z score and >= - 3 Z-score)	28.3	34.4	35.5
Underweight [7] (low weight for age) (6-59 months)			
Children who are underweight (weight-for-age <-2 z-score)	46.5	72.5	59.7
Children who are severely underweight (weight-for-age <-3 z-score)	11.1	36.1	21.5
Children who are moderately underweight (<-2 z score and>= -3 Z-score)	35.4	36.4	38.2
Anthropometric profile of children aged 0-6 months [8]			
Children who are wasted (weight-for-height <-2 z-score)	24.3	22.0	43.3
Children who are severely wasted (weight-for-height<-3 z-score)	2.7	8.0	16.7
Children who are moderately wasted (<-2 z score and >= - 3 z-score, no edema)	21.6	14.0	26.6
Children with bilateral pitting edema	0.0	0.0	0.0

[1] Children age 6 – 59 months whose z-score of weight for height is below -2 SD units from the median of the 2007 WHO Child Growth standards, are categorised with wasting. It excludes a total of 20 flagged cases.

[2] Children age 6 – 59 months whose z-score of weight for height is below -3 SD units from the median of the 2007 WHO Child Growth standards, are categorised as severely wasted.

[3] Children age 6 – 59 months whose z-score of weight for height is below -2 SD and =/-3SD units from the median of the 2007 WHO Child Growth standards, are categorised as moderately wasted.

[4] MUAC: Mid Upper Arm Circumference. Children with MUAC less than 115 mm are categorised as severe acute malnourished.

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Location of SMART survey			Indicators
Koraput district in Odisha (n=457)	Nabarangpur district in Odisha (n=537)	Pooled (n=2315)	
			ANTHROPOMETRIC PROFILE OF CHILDREN AGED 6-59 MONTHS
			Acute Malnutrition (low weight for height, low MUAC and/or bilateral pitting edema) (6-59 months)
28.7	39.1	31.1	Children with wasting (weight-for-height <-2 z-score) [1]
3.8	6.9	5.4	Children with severe wasting (weight-for-height<-3 z-score) [2]
24.9	32.2	25.7	Children with moderate wasting (weight-for-height <-2 z score and >= - 3 z-score, no edema) [3]
8.3	9.9	9.3	Children with MUAC [4] <125 mm
0.9	1.9	1.7	Children with MUAC <115 mm
7.4	8.0	7.6	Children with MUAC (<125 mm and >= 115 mm, no edema)
29.9	39.8	32.5	Children who are wasted with weight-for-height <-2 z-score and/or MUAC <125 mm
4.1	7.3	5.8	Children who are severely wasted with weight-for-height <-3 z-score and/ or MUAC< 115 mm
0.0	0.0	0.0	Children with bilateral pitting edema [5]
7.1	23.0	25.7	Children with severe acute malnutrition whose mother were severely wasted based on MUAC <210 mm
19.4	21.2	20.2	Children who are both stunted and wasted
2.2	2.1	2.4	Children who are both severely stunted and severely wasted
			Stunting [6] (low height for age) (6-59 months)
50.1	47.8	52.1	Children who are stunted (height-for-age <-2 z-score)
16.0	15.9	19.1	Children who are severely stunted (height-for-age <-3 z-score)
34.1	31.9	33.0	Children who are moderately stunted (<-2 z score and >= - 3 Z-score)
			Underweight [7] (low weight for age) (6-59 months)
55.8	62.3	58.8	Children who are underweight (weight-for-age <-2 z-score)
18.2	23.3	21.5	Children who are severely underweight (weight-for-age <-3 z-score)
37.6	39.0	37.3	Children who are moderately underweight (<-2 z score and>= -3 Z-score)
			Anthropometric profile of children aged 0-6 months [8]
11.4	19.6	23.4	Children who are wasted (weight-for-height <-2 z-score)
2.3	4.4	6.1	Children who are severely wasted (weight-for-height<-3 z-score)
9.1	15.2	17.3	Children who are moderately wasted (<-2 z score and >= - 3 z-score, no edema)
0.0	0.0	0.0	Children with bilateral pitting edema

[5] Bilateral pitting edema is characterized by the presence of pits on both feet of the child. Nutritional edema always appears first on feet and as severity increases edema can advance to legs, limbs and face. A child with bilateral pitting edema is categorized as children with SAM and medical complication.

[6] A stunted child has a height-for-age Z-score that is -2SD below the median of the 2007 WHO child growth standards.

[7] An underweight child has a weight-for-age Z-score that is -2SD below the median of the 2007 WHO child growth standards.

[8] Survey was not designed to provide nutritional status of infants aged 0-6 months that can be generalised to the overall population.

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Indicators	Location of SMART survey: Kesla block in Madhya Pradesh	Khuntpani block in Jharkhand	Naraini block in Uttar Pradesh
MORBIDITY PROFILE OF CHILDREN AGED 0-59 MONTHS[9]			
Children suffered from diarrhea in the last 2 weeks preceding the survey			
0-5 months	18.4	19.6	13.8
6-59 months	21.1	23.4	28.1
Children suffered from symptoms of Acute Respiratory Infection (ARI) in the last 2 weeks preceding the survey			
0-5 months	0.0	-	10.3
6-59 months	5.1	-	17.2
VACCINATION STATUS [10]			
Children age 9-59 months who have received measles vaccine	85.6	86.9	70.3
Children age 9-59 months who received a vitamin-A dose in last 6 months	74.8	69.8	52.1
INFANT AND YOUNG CHILD FEEDING (IYCF) [11]			
Children aged 0-5 months breastfed within one hour of birth	45.2	49.1	51.9
Children under age 6 months exclusively breastfed	66.6	89.1	36.0
Children age 6-8 months receiving solid or semi-solid food	86.4	75.0	62.5
Children age 6-23 months who are continuing breastfeeding	85.6	97.7	92.1
Breastfeeding children age 6-8 months receiving minimum meal frequency [12]	76.2	58.3	26.7
Breastfeeding children age 9-23 months receiving minimum meal frequency [13]	65.6	69.9	69.8
Non-breastfeeding children age 6-23 months receiving minimum meal frequency [14]	25.0	33.3	70.0
Children age 6-23 months receiving minimum diet diversity [15]	9.6	16.1	13.3
Children age 6-23 months receiving acceptable diet [16]	7.8	14.2	9.5
ANTHROPOMETRIC PROFILE OF MOTHERS OF THE CHILDREN AGED 0 - 59 MONTHS [17]	(n=325)	(n=285)	(n=272)
Non-pregnant women			
Non-pregnant women who are stunted i.e. with height <145 cm	4.6	20.7	11.8
Non-pregnant women who are wasted based on MUAC <230 mm	28.9	50.5	47.4
Non-pregnant women who are severely wasted based on MUAC <210 mm	6.8	15.0	15.4
Non-pregnant women with low Body Mass Index (BMI <18.5 kg/m^2)	28.9	48.4	40.1
Non-pregnant women who are stunted (<145 cm) and wasted (<230 mm)	2.5	14.7	7.4

[9] Children aged 0-59 months who were selected for the anthropometric survey were also assessed for the presence of morbidity.
[10] Children aged 9-59 months who were selected for the anthropometric survey were assessed to capture the coverage of the vaccination
[11] Children aged 0-23 months who were selected for the anthropometric survey were assessed to capture the IYCF practices
[12] Proportion of breastfed children 6-8 months of age who received solid, semi-solid, or soft foods, minimum 2 times the previous day
[13] Proportion of breastfed children 9-23 months of age who received solid, semi-solid, or soft foods, minimum 3 times the previous day

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Location of SMART survey: Koraput district in Odisha	Location of SMART survey: Nabarangpur district in Odisha	Location of SMART survey: Pooled	Indicators
			MORBIDITY PROFILE OF CHILDREN AGED 0-59 MONTHS[9]
			Children suffered from diarrhea in the last 2 weeks preceding the survey
19.0	10.9	16.6	0-5 months
26.8	25.0	22.9	6-59 months
			Children suffered from symptoms of Acute Respiratory Infection (ARI) in the last 2 weeks preceding the survey
35.7	21.7	18.1	0-5 months
35.0	27.2	21.2	6-59 months
			VACCINATION STATUS [10]
96.7	82.5	84.7	Children age 9-59 months who have received measles vaccine
87.7	71.8	71.8	Children age 9-59 months who received a vitamin-A dose in last 6 months
			INFANT AND YOUNG CHILD FEEDING (IYCF) [11]
65.8	63.9	50.8	Children aged 0-5 months breastfed within one hour of birth
74.3	91.7	74.5	Children under age 6 months exclusively breastfed
75.0	66.7	72.8	Children age 6-8 months receiving solid or semi-solid food
99.1	94.9	93.3	Children age 6-23 months who are continuing breastfeeding
63.2	60.0	62.9	Breastfeeding children age 6-8 months receiving minimum meal frequency [12]
81.1	75.3	72.6	Breastfeeding children age 9-23 months receiving minimum meal frequency [13]
29.0	25.0	38.9	Non-breastfeeding children age 6-23 months receiving minimum meal frequency [14]
18.5	23.0	23.5	Children age 6-23 months receiving minimum diet diversity [15]
29.0	20.8	19.9	Children age 6-23 months receiving acceptable diet [16]
			ANTHROPOMETRIC PROFILE OF MOTHERS OF THE CHILDREN AGED 0 - 59 MONTHS [17]
(n=347)	(n=380)	(n=1609)	**Non-pregnant women**
14.4	11.3	12.4	Non-pregnant women who are stunted i.e. with height <145 cm
34.4	48.9	41.4	Non-pregnant women who are wasted based on MUAC <230 mm
8.3	13.2	11.4	Non-pregnant women who are severely wasted based on MUAC <210 mm
32.1	48.2	39.4	Non-pregnant women with low Body Mass Index (BMI <18.5 kg/m^2)
6.7	7.1	7.5	Non-pregnant women who are stunted (<145 cm) and wasted (<230 mm)

[14] Proportion of non-breastfed children 6-23 months of age who received solid, semi-solid, or soft foods, minimum 4 times the previous day
[15] Proportion of children 6–23 months of age who received foods from 4 or more food groups the previous day
[16] Proportion of children 6–23 months (breastfed and non-breast-fed) of age who had at least minimum dietary diversity and minimum meal frequency during the previous day
[17] Mothers with children below 5 years in the sampled households were selected for maternal nutrition assessment.

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Indicators	Location of SMART survey: Kesla block in Madhya Pradesh (n=33)	Khuntpani block in Jharkhand (n=22)	Naraini block in Uttar Pradesh (n=37)
Pregnant women			
Pregnant women who are stunted i.e. with height <145 cm	6.1	13.6	24.3
Pregnant women who are wasted based on MUAC <230 mm	36.4	59.0	56.8
Pregnant women who are severely wasted based on MUAC <210 mm	3.0	22.7	21.6
Pregnant women who are stunted (<145 cm) and wasted (<230 mm)	3.0	13.6	11.1
HOUSEHOLD FOOD SECURITY [18]			
Households with Antyodaya Anna Yojana (AAY) card [19]	5.0	11.6	14.0
Households with Below Poverty Line (BPL) card [20]	58.6	65.2	46.3
Families entitled for either AYY or BPL card but haven't received card	16.7	-	28.3
Household received PDS ration with either AYY or BPL card in the last 30 days [21]	76.9	-	82.0
Households that received Take Home Ration (THR) for children (6months-6 years) from the Anganwadi center in the last 30 days [22]	82.5	-	27.9
Children living in food secure households [23]	82.2	69.5	49.3
Children living in food insecure households	17.8	30.5	50.7
Children living in mildly food insecure households [24]	2.8	-	13.7
Children living in moderately food insecure households [25]	9.7	24.3	14.0
Children living in severely food insecure households [26]	5.3	6.2	23.0
USE OF MOSQUITO NETS [27]			
Households with usable mosquito net	62.7	55.3	67.6
Children <59 months who slept under the mosquito-net the previous night	36.0	30.2	48.2

[18] Sampled households with children aged 0-59 months were included for the household food insecurity assessment.

[19] Antyodaya Anna Yojana (AAY) cards are distributed to those households which comprise the poorest segments of the of the BPL population, including all households who are perceived to be at the risk of hunger. These households are entitled to receive 14 kg wheat per card at Rs. 2 per kg and 21 kg rice per card at Rs. 3 per kg. Retrieved from : http://www.pdsportal.nic.in/main.aspx.

[20] Below Poverty Line (BPL) cards are distributed to those households living below poverty line, which includes households with a Monthly Per Capita Consumer Expenditure (MPCE) less than Rs. 971.28 (Bihar) (Report of the Expert Group to Review the Methodology for Measurement of Poverty, Government of India Planning Commission, June 2014). These households are entitled to receive 10 kg wheat per card at Rs. 5.22 per kg, 15 kg rice per card at Rs. 6.78 per kg, and 1.49 kg sugar per family at Rs. 13.5 per kg. Retrieved from : http://www.pdsportal.nic.in/main.aspx

[21] Under the national Food Security Act (NFSA), priority households are entitled to receive food-grains at subsidized rates each months, included only those households with a ration card
(AYY and BPL card) and accessing Public distribution System (PDS) in the month preceding the survey

[22] Supplementary food is provided to the ICDS beneficiaries under ICDS

Key Results of the SMART Survey on Nutrition, Food Security and WASH

Location of SMART survey			Indicators
Koraput district in Odisha (n=27)	Nabarangpur district in Odisha (n=50)	Pooled (n=169)	
			Pregnant women
25.9	2.0	13.0	Pregnant women who are stunted i.e. with height <145 cm
33.3	52.0	47.9	Pregnant women who are wasted based on MUAC <230 mm
7.4	12.0	13.0	Pregnant women who are severely wasted based on MUAC <210 mm
11.1	0.0	5.9	Pregnant women who are stunted (<145 cm) and wasted (<230 mm)
			HOUSEHOLD FOOD SECURITY [18]
9.7	16.4	11.4	Households with Antyodaya Anna Yojana (AAY) card [19]
70.9	70.4	63.0	Households with Below Poverty Line (BPL) card [20]
11.9	8.6	15.3	Families entitled for either AYY or BPL card but haven't received card
78.3	94.9	87.7	Household received PDS ration with either AYY or BPL card in the last 30 days [21]
90.6	91.4	76.6	Households that received Take Home Ration (THR) for children (6months-6 years) from the Anganwadi center in the last 30 days [22]
40.5	43.6	53.0	Children living in food secure households [23]
59.5	56.4	47.0	Children living in food insecure households
11.3	10.6	9.6	Children living in mildly food insecure households [24]
18.1	16.8	14.9	Children living in moderately food insecure households [25]
30.1	29.0	22.5	Children living in severely food insecure households [26]
			USE OF MOSQUITO NETS [27]
84.1	94.7	73.5	Households with usable mosquito net
81.0	85.1	68.5	Children <59 months who slept under the mosquito-net the previous night

[23] HFIAS developed by FANTA was used to assess level of food insecurity at household level. The questionnaire consists of nine occurrence questions that represent a generally increasing level of severity of food insecurity (access), and nine "frequency-of-occurrence" in the last 30 days. A food secure household experiences none of the food insecurity conditions, or just experiences worry, but rarely.

[24] A mildly food insecure household worries about not having enough food sometimes or often, and/or is unable to eat preferred foods, and/or eats a more monotonous diet than desired and/or some foods considered undesirable, but only rarely. But it does not cut back on quantity.

[25] A moderately food insecure household sacrifices quality more frequently, by eating a monotonous diet or undesirable foods sometimes or often, and/or has started to cut back on quantity by reducing the size of meals or number of meals, rarely or sometimes.

[26] A severely food insecure household has graduated to cutting back on meal size or number of meals often, and/or experiences any of the three most severe conditions (running out of food, going to bed hungry, or going a whole day and night without eating), even as infrequently as rarely.

[27] Sampled households with children below 5 years were assessed to capture the availability and usage of mosquito nets.

Key Results of the SMART Survey on Nutrition, Food Security and WASH

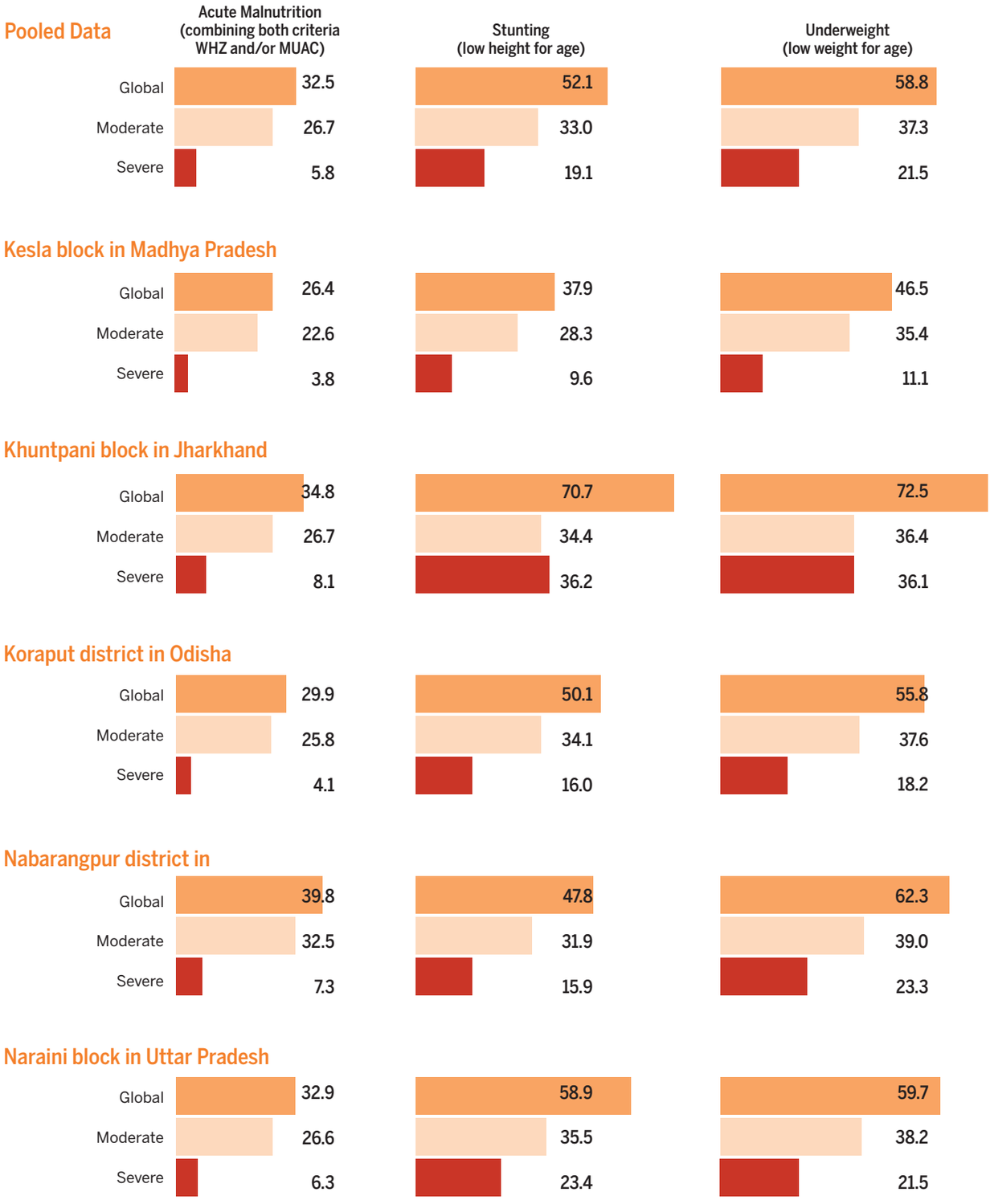
Indicators	Location of SMART survey: Kesla block in Madhya Pradesh	Khuntpani block in Jharkhand	Naraini block in Uttar Pradesh
WATER, SANITATION AND HYGIENE (WASH) PRACTICES [28]			
Households that spend >30 minutes to fetch drinking water	11.9	17.3	7.4
Households treated water for drinking purpose (using water purifying techniques)	43.3	36.1	18.4
Households used toilet facility at house or public	66.8	4.8	27.7
Households practicing open defecation	33.2	95.2	72.3
Households practicing open disposal of the stool of children under 3 years	18.8	46.1	51.3
Households had stagnant or sewage water near their houses	34.6	76.5	53.5
Households with solid waste accumulated near their houses	34.1	45.0	46.2
Mothers using water and soap to wash their hands	82.5	48.0	71.5
Mothers using water and ash to wash their hands	10.0	3.0	7.7
Mothers using only water to wash hands	2.8	48.8	5.0
Mothers washed their hands before mealtime	65.4	83.8	44.6
Mothers washed their hands before cooking food/food preparation	48.8	20.8	36.6
Mothers washed their hands after using toilet/defecation	81.7	77.1	81.5
Mothers washed hands after handling cattle/poultry	22.2	-	12.7

Key Results of the SMART Survey on Nutrition, Food Security and WASH

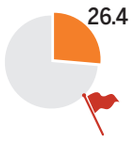
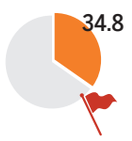
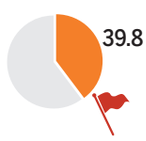
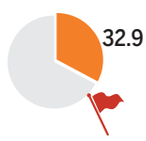
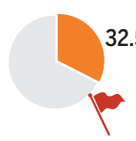
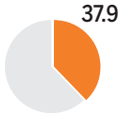
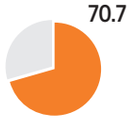
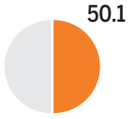
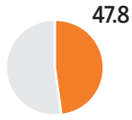
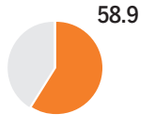
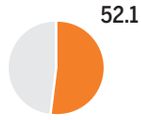
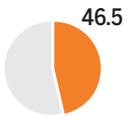
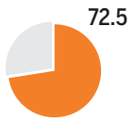
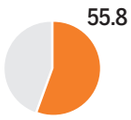
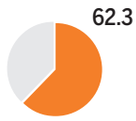
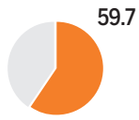
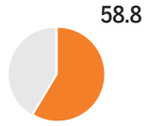
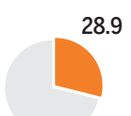
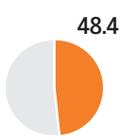
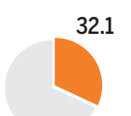
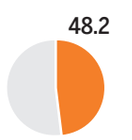
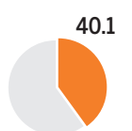
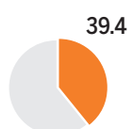
Location of SMART survey			Indicators
Koraput district in Odisha	Nabarangpur district in Odisha	Pooled	
			WATER, SANITATION AND HYGIENE (WASH) PRACTICES [28]
18.3	11.3	13.5	Households that spend >30 minutes to fetch drinking water
41.5	22.2	33.9	Households treated water for drinking purpose (using water purifying techniques)
15.9	16.0	25.2	Households used toilet facility at house or public
84.1	84.0	74.8	Households practicing open defecation
40.9	31.8	48.6	Households practicing open disposal of the stool of children under 3 years
27.8	40.8	35.4	Households had stagnant or sewage water near their houses
31.1	48.2	40.8	Households with solid waste accumulated near their houses
75.1	71.3	69.9	Mothers using water and soap to wash their hands
2.4	3.1	4.8	Mothers using water and ash to wash their hands
22.2	25.4	21.8	Mothers using only water to wash hands
88.9	74.2	82.4	Mothers washed their hands before mealtime
37.6	27.4	44.6	Mothers washed their hands before cooking food/food preparation
91.3	58.5	81.7	Mothers washed their hands after using toilet/defecation
29.6	22.7	35.3	Mothers washed hands after handling cattle/poultry

[28] Sampled households with children below 5 years were assessed to capture the availability and usage of mosquito nets.

Percentage children (6-59 months) stunted, wasted, underweight



Comparison of Survey results with World Health Organization (WHO) classification for Public Health Significance (1995)[29]

WHO classification for Public Health Significance	Kesla block (Madhya Pradesh)	Khuntpani block (Jharkhand)	Koraput district (Odisha)	Nabarangpur district (Odisha)	Naraini block (Uttar Pradesh)	Pooled Data
CHILD NUTRITIONAL STATUS						
Global Acute Malnutrition (GAM) (WHZ<-2 z-score and/or MUAC <125 mm and/or edema)						
< 5%: Acceptable 5-9%: Poor 10-14%: Serious ≥ 15%: Critical	 26.4	 34.8	 29.9	 39.8	 32.9	 32.5
Prevalence of Global stunting						
< 20%: Low prevalence 20-29%: Medium prevalence 30-39%: High prevalence ≥ 40%: Very high prevalence	 37.9	 70.7	 50.1	 47.8	 58.9	 52.1
Prevalence of global underweight						
< 10%: Low prevalence 10-19%: Medium prevalence 20-29%: High prevalence ≥ 30%: Very high prevalence	 46.5	 72.5	 55.8	 62.3	 59.7	 58.8
MATERNAL NUTRITIONAL STATUS						
Prevalence of underweight among adult non-pregnant women (BMI < 18.5 kg/m^2)						
5-9%: Low prevalence 10-19%: Medium prevalence 20-39%: High prevalence ≥ 40%: Very high prevalence	 28.9	 48.4	 32.1	 48.2	 40.1	 39.4

[29] Nutrition Landscape Information System (NLIS) Country Profile Indicators, Interpretation Guide, 2010 http://www.who.int/nutrition/nlis_interpretation_guide.pdf

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