Caritas® INDIA
The Joy of Service...

Midline Assessment Report

TOWARDS A LIFE OF VIGOUR

SABAL
An Integrated Nutrition and Food Security Programme for the Korku tribe

Funding Partners

caritas Germany

BMZ Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

Implementing Organisations

TOWARDS A LIFE OF VIGOUR

Midline Assessment Report of
***SABAL* –** An Integrated Nutrition and Food Security Programme for the Korku tribe

CREDITS

Research Design, Implementation and Report
Dr. Saju MK, Robin George, Mukund Deshmukh and Dileesh G.

Cover Design
Patrick Hansda

To cite the report
Towards a Life of Vigour, Caritas India, 2020

Copyright
Any part of this research report can be used or cited with an acknowledgement of Caritas India.

© Caritas India, February 2020

Published by

Caritas® INDIA
The Joy of Service...

CBCI Centre, 1 Ashok Place
New Delhi 110001
www.caritasindia.org

ACKNOWLEDGEMENT

SABAL programme, with its bouquet of services and solutions, helped *Korku*s stage a remarkable recovery from chronic hunger and malnutrition. The impact was evidently visible on the indicator of children's nutrition and health status, which is elaborated at length in this report. Caritas India and her partners express gratitude to **BMZ Germany** for offering funding support to this programme and thus contributing heavily to creating better tomorrows for *Korku* children.

Caritas India and her partners also appreciate and recognize the technical and financial support that was made available to *SABAL* by **Caritas Germany**. Ms. Julia Gietmann and Mr. Peter Seidel of Caritas Germany have played a pivotal role in improving the levels of effectiveness of *SABAL*.

Caritas India acknowledges the inspiring dedication and tireless efforts of the five implementing partners i.e., **JVS Amravati**, **KDSS Khandwa**, **DSC Amravati**, **SSSS Khandwa** and **MSSWS Amaravati** for extricating *Korku* communities from the clutches of hunger and malnutrition. Project teams of all five partners had braved numerous challenges, even traversing treacherous terrains on a regular basis, to reach out to the remotest villages for helping communities on agriculture, food and nutrition. They accepted the challenge of working in a tough geography as their mission and embraced the *Korku*s as their brethren.

This success narrative, which is emphatic considering the context in which it was accomplished, would not have been possible with the cooperation of *Korku* community. We are so moved by the enthusiasm and the openness of *Korku* community. One of the most valuable learnings of *SABAL* was the courage and openness of *Korku* community to critically reflect on the reality of malnutrition and identifying the underlying, often invisible, social and cultural factors of malnutrition. The participation of *Korku* community, especially of women and adolescents, in the field level processes of the project were amazing and inspiring.

***SABAL* Management Team**

CONTENTS

1. CONTEXT _____ 6

1.1. Goal and Objectives *(6)*

1.2. Targeted Population *(7)*

2. OBJECTIVE AND METHODOLOGY OF ASSESSMENT _____ 7

2.1. Rationale for Midline Assessment *(7)*

2.2. Midline Assessment Methodology *(7)*

2.3. Data Collection: Tools and Processes *(8)*

2.4. Analysis *(9)*

2.5. Limitations of The Study *(9)*

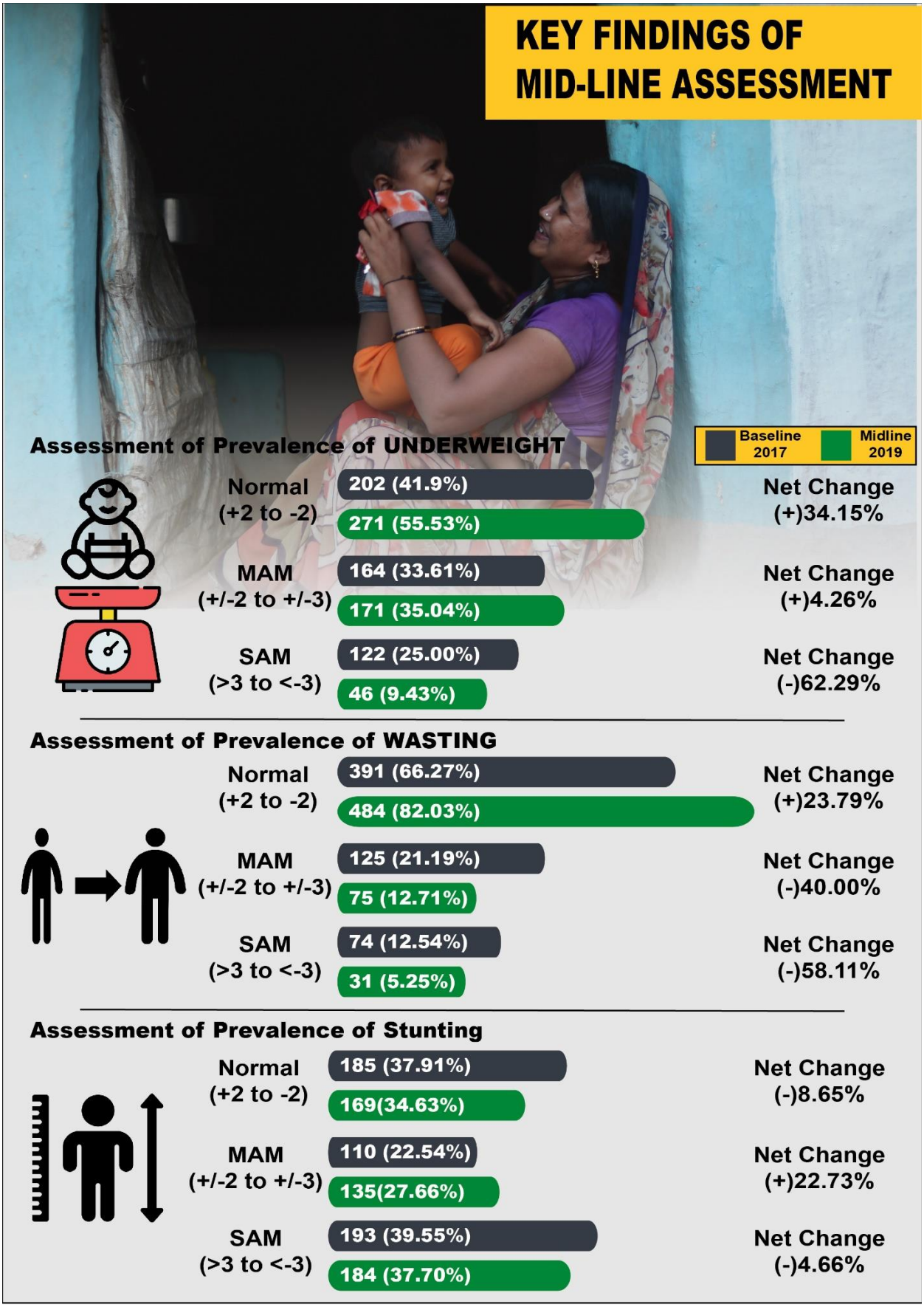
3. FINDINGS OF MIDLINE ASSESSMENT _____ 10

3.1. Assessment of Prevalence of UNDERWEIGHT *(10)*

3.2. Assessment of Prevalence of WASTING *(11)*

3.3. Assessment of Prevalence of STUNTING *(12)*

4. CASE STUDIES _____ 14


KEY FINDINGS OF MID-LINE ASSESSMENT
Baseline 2017
Midline 2019
Assessment of Prevalence of UNDERWEIGHT
Normal (+2 to -2)
202 (41.9%)
271 (55.53%)
Net Change (+)34.15%
MAM (+/-2 to +/-3)
164 (33.61%)
171 (35.04%)
Net Change (+)4.26%
SAM (>3 to <-3)
122 (25.00%)
46 (9.43%)
Net Change (-)62.29%
Assessment of Prevalence of WASTING
Normal (+2 to -2)
391 (66.27%)
484 (82.03%)
Net Change (+)23.79%
MAM (+/-2 to +/-3)
125 (21.19%)
75 (12.71%)
Net Change (-)40.00%
SAM (>3 to <-3)
74 (12.54%)
31 (5.25%)
Net Change (-)58.11%
Assessment of Prevalence of Stunting
Normal (+2 to -2)
185 (37.91%)
169(34.63%)
Net Change (-)8.65%
MAM (+/-2 to +/-3)
110 (22.54%)
135(27.66%)
Net Change (+)22.73%
SAM (>3 to <-3)
193 (39.55%)
184 (37.70%)
Net Change (-)4.66%

TOWARDS A LIFE OF VIGOUR

Midline Assessment Report of
SABAL – An Integrated Nutrition and Food Security Programme for the Korku tribe

1. CONTEXT

*Korku*s, a Scheduled Tribe (ST) community living in socio-economic and political backwardness, lives in the Satpura mountain range that runs along the border of Madhya Pradesh and Maharashtra. *Korku* community, an originally hunting and gathering community has now settled down as cultivators in Khalwa block of Khandwa district of Madhya Pradesh and Melghat region of Maharashtra. Caritas India with the cooperation and support of Caritas Germany and BMZ, had launched *SABAL* programme in 93 villages of Khandwa and Amravati districts as a response to the grave malnutrition level that was revealed by the National Family Health Survey-4 (NHFS-2015-16). NFHS-4 had reported that 49.9% of Under 5 years of age (U5) children of Khandwa district were 'Underweight' (weight for age), 23.2% are 'Wasted' (weight for height) while 46.8% are 'Stunted' (height for age). The district also had very high levels of anaemia. NFHS-4 had revealed that 59.2% non-pregnant women and 65.8% pregnant women were suffering from anaemia (NFHS-4). *SABAL* was launched in December 2016 to work with *Korku* community of 60 villages of Khalwa block of Khandwa district, Madhya Pradesh and 33 villages of Chikaldhara block of Amravati District, Maharashtra. *SABAL* envisaged, as its main objective, ***"ensuring food security and enhancing the nutrition status of the Korku Communities in the Indian States of Madhya Pradesh and Maharashtra".*** *SABAL was* also aimed at bringing positive changes in diversification of on-farm and off farm practices, use of locally available nutritional practices and strengthening public nutritional support systems.

1.1. Goal and Objectives

SABAL project strategy focuses on reducing nutritional vulnerabilities of *Korku* community by diversifying indigenous food and agriculture systems and by addressing the micro-level gaps of service delivery. This way, *SABAL* was intended to be a multi-sectoral intervention with focusses of agriculture, behaviour change, good governance leading to improved service delivery and engagement with duty bearers. The four-fold objective of *SABAL* are;

- For 8000 Korku households in the Khalwa block of Khandwa District (Madhya Pradesh) and in the Melghat block of Amravati district (Maharashtra) food security is enhanced and a diversification in food production and intake has taken place.
- 6000 Korku households are aware of the nutrition value of protein and have achieved protein self-sufficiency.
- Korku communities, especially women and children, will have access to institutional nutritional offices and schemes.
- Nutrition care and support institutions as well as local governance systems are made more responsive and accountable with the initiatives of Korku collectives and advocacy.

1.2. Targeted Population

SABAL was to achieve its goals by working with Korku community of 60 villages of Khalwa block of Khandwa district, Madhya Pradesh and 33 villages of Chikaldhara block of Amravati District, Maharashtra. The focus groups of *SABAL* included mothers having children under the age group of 0-5 years in the intervention villages, farmers, adolescent girls, community opinion makers and health and nutrition service providers.

2. OBJECTIVE AND METHODOLOGY OF ASSESSMENT

2.1. Rationale for Midline Assessment

Improving the nutritional status of the children under five years is one of the primary outcomes of the SABAL project. A baseline study was conducted on the health status of the children (0-5 Years) at the initiation of the project in 2017, to help the project team to understand the current nutritional status of the children in the intervention area. This has helped project team to benchmark nutritional status of the children in the intervention villages. After more than a year of implementation of the SABAL Project, CARITAS India project team proposed an assessment of the performance of the intervention on key performance indicators. Additionally, the team wanted to document the critical best practice of the project and produce Knowledge products for organizational learning. This midline assessment was aimed at helping the project team to systematically measure changes concerning the baseline results and establish that the improvement has happened among targeted children through the SABAL project at the community level. More specifically, the midline study can help the project team identify the healthy nutritional practices adopted community and to take mid-course corrections in the project strategy for the remaining two and half years of project implementation.

2.2. Midline Assessment Methodology

The midline assessment, a longitudinal study conducted in August – September 2019 of the nutrition outcomes of children under 5 years, was based on the similar study conducted in 2017 covering 1983 children. Nutrition profiling of children in 2017 was conducted to study the extent of malnutrition and to define the point of departure of the programme.

Baseline Survey – 2017

A three-factor assessment covering (i) age, (ii) weight and (iii) height/length was conducted by trained enumerators with a door-to-door survey in July-August 2017 in 30 villages of Khandwa district where *SABAL* programme is being implemented. Village-wise lists of all children below-five years were generated based on the database maintained by local Anganwadis and door-to-door visits were conducted to take the measurements of children below 5 years.

A total of 1983 children[1] were profiled during the census survey using a tailor's tape for measuring height/length and salter machine/weighing scale for measuring the weight. All

[1] There were 4821 children below 5 years registered with Anganwadis at the time of the profiling in 2017; of these 2838 were not available at the time of the assessment due to migration, short-distance travel or other factors.

children below five years who were available at the time of study in the villages were covered by the survey. The date of birth, weight, height/length were then entered in Anthro software[2] for generating the Z-score[3]. Based on the Z-score for Weight for Age (Underweight) the profiled children were categorized into three categories of 'Normal', 'Moderately Acute Malnourished'[4] and 'Severe Acute Malnourished'[5]. The *Underweight* categorization based on the nutrition assessment done in 2017 is given below;

	Severity level (Visually Distinguishing)	Children Profiled in 2017
Underweight/WAZ (Weight for Age Z-Score) Indicators	**Normal** (+2 to -2)	952
	Moderately Acute Malnourished – MAM (+2 to +3 or -2 to -3)	680
	Severe Acute Malnourished (>3 or <-3)	351
	Total	**1983**

Midline Survey – 2019

The three-factor assessment for assessing the nutrition status of children which was conducted in 2017 was repeated in August-September 2019 using a stratified random sampling method. Sampling size of each of the three strata of children belonging to three severity measures (normal, MAM and SAM) was determined while conforming to the reliability expectation of 95% confidence level and 5% confidence interval. Given the probability of children who may not be traceable due to migration, no-response and other factors, the sample size was increased by 10% to account for the 'no response'. After calculating the sample size per category, *random function* of MS Excel was used for selecting samples from the pre-entered database of all three severity levels Normal, MAM and SAM categories.

Sampling Grid					
Underweight/WAZ (Weight for Age Z-Score) Indicators:	**Severity level (Visually Distinguishing)**	**Children Profiled in 2017**	**Sample Size**	**10% contingency**	**Total**
	Normal	952	274	27	301
	Moderately Acute Malnourished	680	246	25	271
	Severe Acute Malnourished	351	184	18	202
	Total	**1983**	**704**	**70**	**774**

2.3. Data Collection: Tools and Processes

Nutrition profiling of the children, during the baseline and midline survey, were conducted by an 8-member field team that was trained on collecting accurately measurement data of children

[2] Anthro software developed by WHO for the application of the WHO Child Growth Standards in monitoring growth and motor development in individuals and populations.

[3] A Z-score is a numerical measurement of a value's relationship to the mean (average) of a group of values, measured in terms of standard deviations from the mean.

[4] Indicates conditions related to nutritional deficiency with Z-score ranging from -3 to -2 and +2 to +3.

[5] Indicates life threatening condition below Z-score of -3 or above +3.

under 5 years and feeding the collected into Anthro software on a real-time basis using smartphones. All personnel had attended a 3-day training, both at the time of the baseline and at the time of midline, on data collection and data entry. A two-tier verification and validation system was put in place to ensure accuracy of data. The data of sample population was collected by surveyors and fed into *Anthro software* on a real-time basis. The project coordinator was responsible for the first round of data verification. The entered data was verified again by the programme manager before the database was finalized. The list generated by *Anthro* was transferred to MS Excel for generating various tables for analysis. The study also used *count* functions, *percentage* techniques using pivot table and other appropriate excel functions for the quantitative analysis.

2.4. Analysis

WHO-Anthro, the data collection application that was used in the survey, has an internal validation feature for avoiding wrong entries. Data analysis was completed centrally by a Caritas India team which also conducted another round of reliability check by verifying selected samples.

Data Exclusion: All 1983 children who were measured during the baseline in August 2017 were below-five-years old. The midline considered all these 1983 children as the universe and samples were taken from three categories of severity levels. While assessing Stunting (Height for Age) and Underweight (Weight for Age), the data of children who were above five years at the time of midline but were less than five years at the time of baseline were not considered. This is because the WHO malnutrition measurement standards and calculations are designed for assessing the growth parameters of children below five years. However, the data of children who were below five years at the time of baseline in 2017 but who had exceeded five years at the time of midline was considered for assessing Wasting (Weight for Height). This is because the Anthro software allowed calculating the 'Wasting' or Weight for Height level of children who are >5 till 7 years based on the height till 120cms.

2.5. Limitations of The Study

Despite taking 10% samples as contingency provision for accounting for the children who might not be traceable despite multiple visits to families, 184 children out of the total 774 randomly selected samples could not be contacted. Out of these 184 children who could not be contacted, 179 children had either migrated out of villages with their families in search of wage labor *or* moved temporarily to relatives' families *or* permanently moved out of villages. The remaining five children of these 184 children who could not be traced were found to have died. *SABAL* team had identified the cause of the deaths of these children. One child had died due to post-surgery complications while undergoing treatment in Indore. One child had died due to kidney failure, and another because of blood cancer. The reason for the death of one child is unknown and one child died after brief illness when his family had migrated to a city that is approximately 500 km away. At the time of the midline study, a filtering of children who are above five years was possible. These children who would have crossed the five-year mark were not removed from the midline study because of the possibility of assessing their 'Wasting' levels even after crossing the mark of five-year age.

3. FINDINGS OF MIDLINE ASSESSMENT

3.1. Assessment of Prevalence of *UNDERWEIGHT*

The summary of the baseline study of children who were profiled in three severity levels of Underweight category in 2017 and then in 2019 shows that there is a considerable recovery from SAM and MAM categories to normal category. As discussed earlier, only 488 children under five years could be contacted of the 774 children who were randomly selected for the study.

Change in Children's Nutrition Status (< 5 Years) WEIGHT for AGE (UNDERWEIGHT)

Status	Baseline (2017)	Midline (2019)	Variance	Net Change
Normal (+2 to -2)	202 (41.39 %)	271 (55.53%)	69	(+) 34.15%
MAM (+/-2 to +/-3)	164 (33.61%)	171 (35.04%)	7	(+) 4.26%
SAM (>3 or <-3)	122 (25.00%)	46 (9.43%)	(-) 76	(-) 62.29%
Total	**488* (100.00%)**	**488* (100.00%)**	-	-

*(*774 children randomly selected = 488 U5-children contacted + 286 were not considered/ not contacted (102 are children >5 + 179 not traceable + 5 died).*

The midline survey revealed impressive improvement in the nutrition status of children with 62.29% of Severe Acute Malnourished (SAM) children moving to either normal or MAM categories. Percentage of 'Normal' children increased significantly to 55.53% in 2019 as compared to 41.39% children who were reported 'Normal' in 2017. The most significant positive change was observed in the percentage of children in SAM which came down to 9.43% in 2019 from 25.00% that was recorded in 2017.

Inter-category shifts in Children's (<5 Years) change (*Underweight*)

Nutritional status of children can shift within the three parameters given in the table. There are possibilities that a normal child can slip into MAM category and into SAM category in a year, depending on the various causative factors of malnutrition. Similarly, a MAM child can continue to stay in the same category or become normal or become a SAM and a SAM child can continue to languish in the same category or improve to MAM or normal categories if proper nutrition support is made available for the child. The below-given table shows movement of 202 normal children, 164 MAM children and 122 SAM children who were found to belong to that category in the baseline that was conducted in 2017.

Status	Total Children (Baseline)	Normal-Midline	MAM-Midline	SAM-Midline
Normal	202 (100%)	139 (68.8%)	53 (26.2%)	10 (4.9%)
MAM	164 (100%)	84 (51.2%)	71 (43.2%)	9 (5.4%)
SAM	122 (100%)	48 (39.3%)	47 (38.5%)	27 (22.1%)
Total	**488***	**271**	**171**	**46**

*(*774 children randomly selected = 488 U5-children contacted + 286 were not considered/ not contacted (102 are children >5 + 179 not traceable + 5 died).*

The baseline had identified 202 children as 'Normal' in 2017. While conducting the case-to-case tracing of the nutrition condition of these children in 2017 and 2019 it was found that 53 (26.2%) children had slipped into MAM and 10 children had become SAM. At the time of baseline, there were 164 children in the MAM bracket. Of these, 84 (51.2%) had recovered to 'Normal' while 9 (5.4%) had slipped into SAM category. The most striking positive change was observed in the SAM category which had 122 children when the baseline was conducted. Of these 122 children, 48 (39.3%) had recovered to normal and 47 (38.5%) children had improved their condition to MAM category. Overall, the table presents an encouraging picture of the recovery of malnourished children. However, three negative shifts (Normal to MAM, Normal to SAM and MAM to SAM), even though in lesser degrees, present a disturbing trend and reinforces the fact that all children, even those who once had normal nutritional indices, are not immune to a spell of malnutrition.

The table shows that 68.8% of children who were in the 'Normal' category at the time of baseline continued to be so. Similarly, 71 children (43.2%) of 164 MAM children remained in the same category and 27 (22.1%) children of a total 122 SAM children did not show any improvement in their nutritional status at the time of midline.

3.2. Assessment of Prevalence of *WASTING*

Wasting, one of the three forms of malnutrition, is characterized by a greatly reduced muscle mass and is associated with increased mortality of children. A reduced muscle mass increases the risk of death during infections and in many other different pathological situations. Unlike in the assessment of Underweight where the data of children above five years of age were not included and analyzed, Anthro software allow the analysis of height and weight data of children who are in the height range of 65-120 cm[6]. Therefore, all children whose nutrition status was profiled in the year 2017 were covered in the midline study of 2019. The findings of the change in the context of children's 'Wasting' are presented tabularly below;

Change in Children's Nutrition Status (< 5 Years): WEIGHT for HEIGHT (WASTING)

Status	Baseline - 2017	Midline - 2019	Variance	Deviance (+/-)
Normal (+2 to -2)	391 (66.27 %)	484 (82.03 %)	93	23.79 %
MAM (+/-2 to +/-3)	125 (21.19 %)	75 (12.71 %)	(-) 50	(-) 40.0 %
SAM (>3 or <-3)	74 (12.54 %)	31 (5.25 %)	(-) 43	(-) 58.11 %
Total	590* (100%)	590 (100%)	-	-

*(*774 children randomly selected = 590 children contacted + 179 not traceable/migrated + 5 children who died.)*

Prevalence of children with 'Wasting', as evidenced by the table above, has considerably reduced with the interventions of *SABAL*. There were 391 (66.27%) children in the normal category in the year 2017 which increased by a significant 23.79% in two years to touch 484 or 82.03%. The data also show that there is considerable reduction in the number of MAM and SAM children with the percent of MAM children marking a steep decline by 40% to touch 12.71% from 21.19%. The most visible change is observed in the SAM category which witnessed a reduction of 58.11% in the two years between the baseline to Midline assessments. In all three categories, the positive

[6] https://www.who.int/childgrowth/software/anthro_pc_manual.pdf

variation has been significant. Positive deviance in normal category is obviously a desirable change because of the increase in the number of children in 'Normal' category whereas the negative deviance in MAM and SAM categories also shows a positive change because the reduction in these two categories indicates a general improvement towards Normal (for children from SAM and MAM categories) or MAM (for children of SAM category).

Inter-category shifts in Children's (<5 Years) change (*Wasting*)

As discussed in the context of the Underweight assessment, the nutritional status of children can possibly move within the three parameters of Normal, MAM and SAM. There are possibilities that a normal child can slip into MAM category and into SAM category in a year, depending on the various causative factors of malnutrition. Similarly, . MAM children can continue to stay in the same category or become normal or become a SAM and a SAM child can continue to remain in the same category or improve to MAM or normal categories depending on the nutrition availability for the child. The below-given table illustrates the inter-category movements of children in two years (between baseline in 2017 and midline in 2019).

Status	Total Children (Baseline)	Normal-Midline	MAM-Midline	SAM-Midline
Normal	391 (100%)	329 (84.1 %)	42 (10.7 %)	20 (5.1 %)
MAM	125 (100%)	98 (78.4 %)	18 (14.4 %)	9 (7.2 %)
SAM	74 (100%)	57 (77.0 %)	15 (20.2 %)	2 (2.7 %)
Total	**590***	**484**	**75**	**31**

*(*774 children randomly selected = 590 children contacted + 179 not traceable/migrated + 5 children who died.)*

The trend of positive change is visible in all three categories with the most outstanding positive change observable in SAM category where 97.3% children had recovered to either *Normal* or *MAM* categories and 78.4% children of MAM category moving to 'Normal' category. However, 15.9% of children in Normal bracket couldn't sustain their healthy status and slipped into MAM and SAM categories. *SABAL* had offered prioritized services to SAM and MAM children and focused efforts for their recovery to 'Normal' category. The strategy, as proven by the outcomes that could be inferred from this table, indeed was successful in terms of creating encouraging positive deviances in both categories of SAM and MAM. The relatively high incidence of Normal children falling into SAM and MAM categories indicates to the need of providing more attention to even children of Normal category who are *also* vulnerable to malnutrition in the absence of care and attention.

3.3. Assessment of Prevalence of *STUNTING*

Stunting, as another feature that is associated with the increased mortality of children, is one of the three forms of malnutrition characterized by impaired growth or a condition where children have a low height for their age. Stunted growth refers to the failure to reach one's full potential for growth and may become a permanent impairment for the child. The definition of stunting according to the World Health Organization (WHO) is for the 'height for age' value to be less than two standard deviations of the WHO Child Growth Standards median. Once established, stunting

and its effects typically become permanent. Stunted children may never regain the height lost as a result of stunting, and most children will never gain the corresponding body weight. The midline study even though had contacted and collected growth parameters from 590 children, Anthro software does not calculate the Stunting rate of children who have exceeded five years age. Hence, data of 102 children who were more than five years at the time of midline were not included in this assessment. The result of the midline survey of Stunting is given below;

Change in Children's Nutrition Status (< 5 Years): HEIGHT for AGE (STUNTING)

Status	Baseline - 2017	Midline - 2019	Variance	Deviance (+/-)
Normal (+2 to -2)	185 (37.91 %)	169 (34.63 %)	(-) 16	(-) 8.65 %
MAM (+/-2 to +/-3)	110 (22.54 %)	135 (27.66 %)	25	22.73 %
SAM (>3 or <-3)	193 (39.55 %)	184 (37.70 %)	(-) 9	(-) 4.66%
	488* (100 %)	**488 (100 %)**		

*(*774 children randomly selected = 488 U5-children contacted + 286 are not considered/ not contacted (102 are children >5, 179 not traceable/migrated + 5 died).*

Unlike the conditions of *Underweight* and *Wasting,* which are relatively easier to reverse, *Stunting* may prove to be a permanent loss. There have been encouragingly high positive deviance in the cases of Underweight and Wasting categories, but these positive deviances have not had a tellable impact on the Stunting rates. Though there were a very high percentage of Stunted children 193 (39.55%) in the SAM category, the recovery number and percentage were both low. The positive deviance that is noticeable in the SAM category was a mere 4.66% which goes on to prove that Stunting can indeed be a permanent impairment.

******

CASE STUDIES

1. Fighting Malnutrition with Home Remedies

Shantibai would regularly the meetings of the mother collective in her village Dhakochi, Khandwa, to find a way to treat the severe malnutrition of her son Ajay. The two-year-eleven-month-old weighed just 9.3 kg in July 2017 and was in the zone of Severe Acutely Malnourished (SAM). Shantibai learned several local methods for treating her child with home-based remedies from the meetings of the mothers' collective which was raised and capacitated by *SABAL*.

Setting up a nutrition garden near her home was the first step that Shantibai did. She then learned the preparation of *Sattu*, a local nutrition mix, which Ajay liked a lot. *SABAL* team then linked Ajay to the supplementary feeding campaign launched by the district administration, and he started getting eggs on a regular basis.

Ajay helping his mother Shantibai harvest vegetables from the recently started kitchen garden

Ajay responded well to the improved diet and healthy feeding practices and he started gaining weight. With the regular support of *SABAL* team, which visited Shantibai's family on a weekly basis, Ajay recovered to 'normal' from a life-threatening severity of malnutrition. When he turned five years in August 2019 he weighed a healthy 18.9 kgs - an improvement of 9.6 kg in 24 months. Shantibai has now started planting in her field several nutritionally important trees like Moringa, lemon and custard apple.

"Timely care and nutritious food from my farm helped my son recover from illness" said Shantibai.

****

2. Farming for Nutrition

With bright eyes and mischievous smile, Kartik can win everyone's heart. If you would have met the child wo years ago, you would have sighed in grief. When Kartik was one-year-eight-month old, he weighed a mere 8 kg and was severe acutely malnourished. *SABAL* field worker convinced Ajay's mother Betibai to admit him at Nutrition Rehabilitation Centre (NRC). After 14 days' hospital care and nutrition support, Kartik got out of danger zone.

Betibai with her healthy son Kartik

Betibai ever since has become a regular member of the mothers collective and practices everything that she learns from the mothers' collective meetings. She understood the importance of mixed farming and vegetable cultivation for food and nutrition security. She impressed upon her husband Surajlal to cultivate more vegetables in the farm. The family now practices mixed-cropping and has shifted from soybean cultivation to farming food crops like vegetables and millets.

Betibai now knows preparing balanced and wholesome diet with locally available food materials. Millets and vegetables which the family started cultivating have become integral part of family's diet.

"Kartik is now visibly healthier. He has thick hair and is no longer underweight", said a beaming Betibai.

****

3. Traditional Priest Helps Child Recover from Malnutrition

Amritha is a happy and healthy three-year-old child with a charming smile. She lives with her parents in Sunderdev, a remote village in the forest area of Khandwa district. If you meet Amritha today, you'd probably not believe the long, tough battle that she fought against debilitating malnutrition.

It was during the house-to-house screening of *SABAL* team that Amritha was diagnosed as severely malnourished. The local *Bhumka* (traditional healer), who had learned scientific ways of diagnosing and treatment of malnutrition from *SABAL,* persuaded Amritha's parents to immediately take her in the Nutrition Rehabilitation Centre (NRC). Normally Bhumkas prescribe rituals for treating malnutrition but this Bhumka was now educated by *SABAL* about the need of seeking medical treatment. After consulting with the doctor in NRC, Amritha was put on nutrition support at home itself. *SABAL* then got her enrolled in Anganwadi and the Anganwadi worker and *SABAL* field worker started monitoring Amritha's progress on a regular basis. Amritha thus started receiving adequate nutrition supplements and medical care from Anganwadi. *SABAL* team also helped Amritha's family on personal hygiene and cleanliness.

Manisha's children receiving take home ration from Anganwadi worker

A fully recovered Amritha in her house

Amritha's mother Manisha got support to set up nutrition garden in which she grows several vegetables. Manisha also got to know about food and nutrition entitlements, especially the take-home-ration from Anganwadi centre and vaccination. All children of Manisha now access these services from Anganwadi.

"Appropriate home-based care and linking Amritha to Anganwadi services helped her overcome malnutrition with no disruption to our family life and means of earning income", said Manisha.

****

4. Vegetable Cultivation Helps Fight Malnutrition

Urmila knew that everything was not right with her one-year-three-month-old son Rohit but she didn't know how grave the health condition of her young son was. *SABAL* team while conducting the nutrition survey of children in the village identified Rohit as a Severe Acutely Malnourished (SAM) case and persuaded Urmila to seek support of the local Anganwadi centre.

The daily labourers' family couldn't afford to give wholesome food to Rohit because of frequent migration and poverty. Since the family had stopped farming long ago due to recurring crop losses, all food had to be bought from the market. *SABAL* field worker continuously monitored Rohit's nutrition condition and worked closely with local Anganwadi centre to ensure that Rohit gets supplementary nutrition on a regular basis. While Urmila joined the mothers' collective, her husband Totaram joined the farmers' collective formed by *SABAL*. The family which had stopped farming, restarted cultivating food crops on their small piece of land with the technical support of *SABAL* team.

Urmila with her son in their nutrition garden.

Urmila also started developing a nutrition garden which helped the family reduce dependence on market for vegetables. With the seeds that she received from *SABAL*, she cultivated bottle gourd, egg plant, chilly, luffa and pumpkin. She also planted saplings of moringa, lemon and custard apple in her homestead.

Totaram and Urmila realised the value of mix-cropping and started cultivation of several food crops. Totaram reserved some parcel of his land for millet cultivation as well. Regular sessions in the mothers' group on nutritious diet, preparation of local nutrition mixes and childcare practices helped Urmila diversify the food platter of family and provide good nutrition to her children. Within six months Rohit recovered from SAM to normal.

"Rohit can now play, eat and drink like any other child. He does not fall sick often anymore", Urmila shared happily.

****