

# INTEGRATED PROGRAM THROUGH A SUSTAINABLE APPROACH TO ENHANCE NUTRITION AND EARLY CHILDHOOD DEVELOPMENT (ECD) IN A LOWER-MIDDLE-INCOME COUNTRY, ODISHA, INDIA.

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## BACKGROUND



Odisha faces high child undernutrition. AIF supports early childhood development in Mayurbhanj, a tribal district with 36.7% stunting, 28.5% wasting, 49.9% underweight, and 71.7% anemia among children under five. Nearly 1 in 2 children are underweight, and 1 in 3 are stunted or wasted.

## OBJECTIVE



To demonstrate a cost-effective, scalable model for rapid undernutrition reduction in children under five through an integrated public-private partnership.

## OVERVIEW PROGRAM GEOGRAPHY:

Two tribal blocks - Gopabandhu Nagar and Thakurmunda in Mayurbhanj district, Odisha.

Duration - 18 months

Beneficiaries: 15000 children (0-6 years)

Facilities - 388 Anganwadi Centres

Cost:\$50/child/year

Evaluation: Independent quasi experimental study using two stage stratified sampling

## KEY INTERVENTION

### Targeted Supplementary Nutrition Support

Age-appropriate, hot cooked meals for children aged 6-36 months, six days/week, at child care centers, called Anganwadi centers (AWCs). Nutritious snacks, including a **millet-based** recipe, for children aged 37-72 months, six days/week at AWCs.

### Caregiver and Community Engagement

Structured Individual and group counselling sessions on Infant and Young Child Feeding (IYCF) practices, responsive caregiving, and hygiene, reinforced by participatory community outreach to deepen ownership and impact.

Data-driven, targeted home visits for moderately & severely malnourished children; Follow up of cases discharged from Nutrition Rehabilitation Centers (NRCs).

### Systems Strengthening and Convergence

Continuous capacity-building of Anganwadi workers on IYCF, growth monitoring, and early identification of undernutrition. Integrated review systems and strategic coordination with government stakeholders ensure accountability and program sustainability.

## COMPOSITION OF SUPPLEMENTARY NUTRITION [EAR,2020]

### Children 6-12 Months



Energy: ~200 kcal (~1/2 of daily requirement)  
Protein: 40-50% of daily requirement  
Micronutrients: ≥50% of daily requirement for iron, vitamin A, folate, and zinc

### Children 1-3 Years



Energy: ~200 kcal (~1/2 of daily requirement)  
Protein: 40-50% of daily requirement  
Micronutrients: ≥30% of daily iron requirement; 20-30% of at least two others: zinc, vitamin A, folate, calcium

### Children 3-6 Years



Energy: ~300 kcal (~1/2 of daily requirement)  
Protein: 40-50% of daily requirement  
Micronutrients: ≥40% of daily iron requirement; ≥30% of at least two others: zinc, vitamin A, folate, calcium



## STRATEGY & ACTIVITIES: A SUSTAINABLE APPROACH TO ENHANCE NUTRITION AND EARLY CHILDHOOD DEVELOPMENT (ECD).

### Bridging Nutrition Gap:

Introducing additional nutritious hot cooked meal for 6 months to 6 years children

### System Strengthening :

Capacity building of front-line workers (ASHA & AWW) who are part of the government system

### Sustainable Approach Enhancing Nutrition & ECD

### Management Information System (MIS):

Establish the MIS to track the day-wise implementation and view the real-time data monitoring.

### Community Outreach:

Engaging mothers, caregivers and community members to improve knowledge and practices on enhancing nutrition and ECD



Children are receiving hot cooked meals at the Anganwadi center.

## COMMUNITY PARTICIPATION

The program intervention has demonstrated a sustainable approach through strong *community participation*. Mothers and caregivers now regularly come to the AWCs to support Anganwadi Workers (AWWs) and Helpers in preparing hot cooked meals for the children. They also continue learning nutritious cooking practices and are increasingly adopting these at the household level to ensure timely initiation of complementary feeding and improve their children's nutrition status.



Mothers supporting Helpers for preparing hot cook meals at AWC

## SUSTAINABILITY APPROACH UNDER THE INTERVENTION

### INTERVENTION

Mothers and caregivers have started asking support from AIF facilitators to provide handholding support in preparing the recipes introduced at the AWCs, as their children have started demanding the same food at home.

Since the intervention provides one hot cooked meal at the AWC, the core sustainable approach is that mothers and caregivers should prepare and serve the same nutritious food at the household level. This positive change is now visibly emerging through the program intervention.

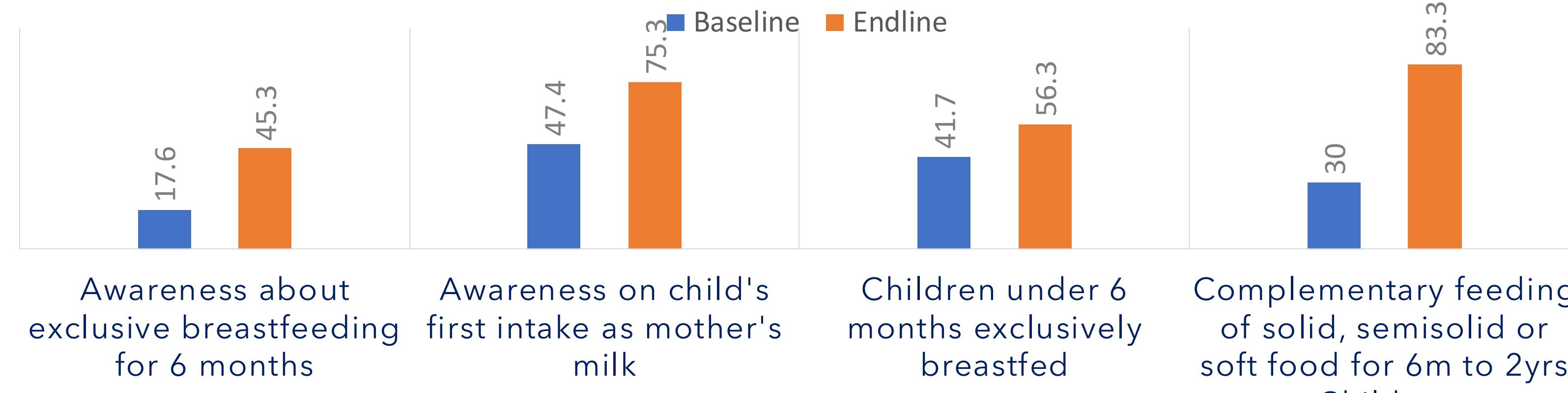


Facilitator guiding mothers to cook nutritious meals at the household level

## RESULTS

There has been significant improvement in key nutrition indicators—especially stunting, wasting, and underweight—within 24 months of program intervention. The Knowledge, Attitude, and Practices (KAP) on Infant and Young Child Feeding (IYCF) have also improved, as reflected in the baseline and endline findings conducted by an external agency. Under Early Childhood Education, children aged 3-6 years are assessed for school readiness—mainly in reading, comprehension, and writing—using ten specific activities. Through our intervention, these assessments have shown a 40% improvement in school readiness.

### Awareness And Practices On Breastfeeding Among Mothers.



### Early Childhood Education (ECE):

- Spatial concept
- Number object matching
- Number comparison
- Sequential thinking
- Pattern completion (Act. 8)

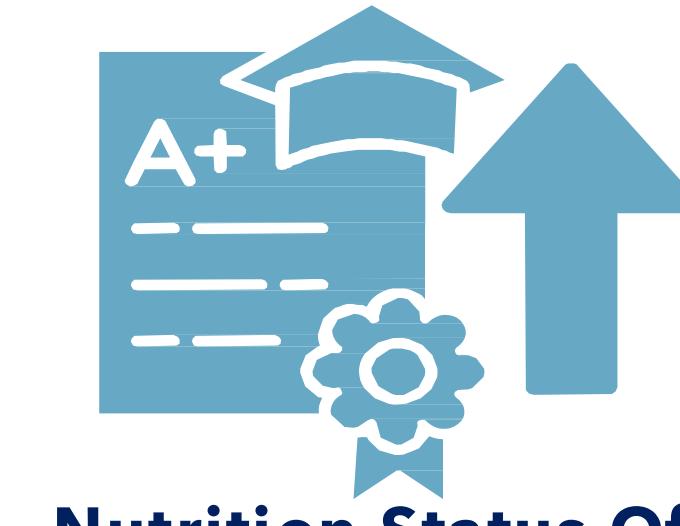
- Pre-number concept
- Sentence formation
- Phonemic awareness
- Following instructions
- Pattern completion (Act. 4)



ECE activities for 3-6-year-old children at AWC

The percentage increase (40.0%) stated here represents an improvement in the learning levels (reading, comprehension, and writing) of pre-primary children as part of their preparedness for formal schooling. The conclusion is drawn based on learners' performance in all 10 activities assessed, which follows the assessment framework developed by the World Bank.

### 40.0%



### Nutrition Status Of Children



## CONCLUSION

The AIF intervention has significantly strengthened child nutrition and early development in Mayurbhanj by improving Anganwadi services, introducing nutritious hot cooked meals, and enhancing frontline worker capacity. Through strong community engagement and sustained SBCC efforts, mothers are increasingly adopting healthy feeding practices at home. These combined actions have reduced stunting, wasting, and underweight levels while improving school readiness, laying a stronger foundation for under-six children.

## ACKNOWLEDGEMENT:

- 1- National Family & Health Survey - 5, 2019-2021: District Factsheet, Mayurbhanj, Odisha.
- 2- Narayan Chandra Jana, et al.; Comparing Patterns and Variations in Health Status between Tribes and Non-Tribes in Odisha of Eastern India with Special Reference to Mayurbhanj District, Odisha : Journal of Geography and Earth Sciences, December 2014.