

# MILLETS IN MID-DAY MEAL SCHEME

Can They Improve Nutrition Outcomes at Scale? Evidence  
from Hyderabad, Bangalore.

D4N 20  
25

Gummadi Sridevi<sup>1</sup>; Amalendu Jyotishi<sup>2</sup>; Kavya Sanjaya<sup>3</sup>

<sup>1</sup>University of Hyderabad; <sup>2</sup>Azim Premji University; <sup>3</sup>Christ University

## BACKGROUND

### POSHAN Scheme:

- Provides hot cooked lunches to Grades 1-8
- Covers 118 million children across 1.12 million schools

### Objective:

- Combat child undernutrition, increase school attendance, ensure food security

### Challenge:

- Despite implementation, high prevalence of undernutrition persists in urban schools

## METHODOLOGY

### Research Design:

Mixed methods (Quantitative & Qualitative)

### Sample:

1,378 children from various government schools  
(Hyderabad: 518, Bangalore: 432)

### Data Collection:

- Structured questionnaires
- Anthropometric measurements
- Meal preferences & food security
- Interviews of school principals, teachers and kitchen staff interviews

## Evidence-Based Recommendations for Millet Integration

- Menu Redesign:** Use regionally acceptable millets with student taste-testing and feedback to improve acceptability and reduce resistance.
- Supply Chain Development:** Build farmer-school linkages and government-NGO partnerships for consistent millet supply and affordability.
- Capacity Building:** Train kitchen staff for millet meal preparation, seek feedback, and support institutional implementation.

## KEY FINDINGS

Persistent nutritional inefficiency despite widespread MDMS implementation (State Support Programmes). Diet diversification - millets offer a sustainable, cost-effective solution to improve child nutrition at scale.

## Comprehensive Comparative Findings: Hyderabad vs Bangalore

Aspect	Hyderabad	Bangalore
<b>Demographic &amp; Educational Patterns</b>	50.58% males, 49.42% females; 57.92% Hindu, 39.38% Muslim; 47.1% OBC, 28.19% OC; Attendance: Decline from Class 1 to 5	84.72% males, 15.28% females; 80.09% Hindu, 15.97% Muslim, 3.94% Christian; 19.9% OBC, 59.2% OC, 11.9% SC, 9% ST
<b>Level of Malnutrition Categories</b>	93.05% underweight, 6.56% normal, 0.19% overweight/obese; 78.19% mild, 14.86% moderate, 5.6% severe underweight	51.62% underweight, 39.35% normal, 6.48% overweight, 2.55% obese; 20.83% severe, 11.57% moderate, 19.21% mild underweight
<b>Level of Malnutrition by Gender</b>	Females: 46.91% UW, 2.32% normal; Males: 46.14% UW, 4.25% normal; Gender-balanced undernutrition	Boys: 46.99% underweight; Girls: 4.63% underweight; Boys 10x more affected
<b>Breakfast Consumption</b>	Only 0.97% eat breakfast at school; 99.03% at home (rice, curries, tea, biscuits, idly, dosa)	Most children eat breakfast at home; Diverse diet, multiple food items
<b>Millets in School Meals</b>	1.35% reported millet inclusion; 98.65% said no millets included; 77% do NOT like millet dishes	76.85% do NOT like millet dishes; Strong cultural preference barrier; Low current millet integration
<b>Home Food Security &amp; Sufficiency</b>	95.75% receive enough food at home; 4.25% not enough; Paradox: Food security exists but malnutrition persists	100% reported sufficient food at home; Yet 51.62% underweight; Quantity vs Nutritional quality paradox
<b>The Critical Paradox</b>	95.75% home food security; 65.09% like MDMS meals; 66.6% Anganwadi attendance; Yet 93.05% underweight! ROOT CAUSE: Meal quality, poor nutritional density despite quantity	100% home food security; Better BMI profile, yet severe millet resistance, gender disparity persists; ROOT CAUSE: Nutritious foods rejected due to taste/culture preferences, need behavior change strategies



## IMPACT STATEMENT

Evidence-based roadmap for diet diversification - millet based MDMS policy at national scale to achieve UN SDG targets (Zero Hunger) and improve child nutrition outcomes

We thank University of Hyderabad - Institute of Eminence