



INNOVATIVE APPROACHES TO COMBAT MALNUTRITION: WHAT CAN INDIA LEARN?

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ABSTRACT

Despite India having implemented many programmes to combat malnutrition over the last five decades, there has hardly been any improvement in malnutrition rates in the country. In fact India has the dubious distinction of having the maximum number of malnourished children in the world, and the nation languishes almost at the bottom of the list of countries with most malnourished children (considering the rates). The ray of hope, however has been through certain innovations/experiments that were carried out by some states, by subtly modifying the existing government strategies to control malnutrition. The case in point has been the Lalitpur Experiment (UP), Velegu Project (AP), Raj Mata Jajau Project (Maharashtra) and Akshay Patra Scheme (Karnataka). The NGOs may also contribute to the cause if they have the zeal to do so. The coming together of political will, knowledge, system-wide bureaucratic commitment, technical capacity, resources and effective implementation can herald positive trends in child nutrition. India can learn a lot from these examples.

KEY WORDS: Malnutrition, ICDS, Lalitpur Experiment, Velegu Project, Raj Mata Jajau Project, Akshay Patra Scheme

INTRODUCTION

The Global Hunger Index released in October 2013, placed India among a group of countries with 'alarming' level of hunger, figuring at the bottom of the list, below China, Sri Lanka, Pakistan and even many Sub-Saharan African countries. (1,2)

Malnutrition "a pathological state resulting from a relative or absolute deficiency or excess of one or more nutrients. (3) Malnutrition or under-nutrition in child and mother is a major preventable cause of death. In India, under-nutrition levels remain persistently and unacceptably high, despite plethora of programmes (ICDS, Mid Day Meal, NRHM and PDS, etc). There has hardly been any improvement between 1998-99 (NFHS-2) and 2005-6 (NFHS-3). On the contrary, anaemia levels

amongst children and mothers as well as wasting amongst children increased. As per the government figures almost two fifth of all children (below 3 years) are underweight (40.4%) or stunted (44.9%) (NFHS 3). This severely persistent malnutrition status over the past four decades has contributed to high morbidity and mortality (amongst children and adults) and eventually hampering economic growth of the country. (4,5)

Malnutrition in India: India performs poorly in malnutrition As per National Family Health Surveys (NFHS-2 for year 1998-99 and NFHS-3, there has not been a significant improvement in malnutrition rates. Currently, as many as 45% of children under three years of age are stunted, 23% are wasted and 40% are underweight. India fares poorly even among the South East Asian countries,



occupying third place from the bottom with only Nepal and Bangladesh faring worse than India.

Even during the first six months of life, when most babies are breastfed, 20-30% of children are undernourished according to each of the three criteria, (stunting, wasting and underweight). However, malnutrition peaks during the first two years of life. From 11.9% prevalence among 0-6 month old infants, it reaches to 58.5% in one to two year old children. This steep rise in malnutrition during the first two years is mainly due to poor infant feeding practices.

ICDS has been the flagship programme of the Government of India for alleviation of Malnutrition, running since 1975. Despite huge amount of funds having been allocated, there has hardly been a dent in the National malnutrition.

OBJECTIVES

There are regions in the country, that have been able to reduce malnutrition substantially either through better implementation of the existing government schemes or through innovative non-government nutrition programmes. Other Indian states can learn from these success stories and emulate them so as to reduce the burden of Malnutrition. The objective of this paper is to study these innovative experiments and learn from them as to how these initiatives have been able to reduce malnutrition, and to outline as to what can be learnt from them.

METHODOLOGY

It is an exploratory study. Data was collected through the technique of 'Secondary data collection' from various sources, like Government reports e.g. National Family Health Survey 2 & 3 (NFHS), National Census data, Planning Commission reports, State level reports, Reports from various Ministries, etc. Data was also obtained from International Organizations e.g. WHO, UNICEF, World Bank and NGOs of repute. A critical review of relevant literature was undertaken keeping the research questions and the objectives of the study in mind. Literature on malnutrition control programs and policies and the 'Best-practices' in India was specifically studied. The data was analysed using suitable statistical techniques.

RESULTS

An in-depth theoretical interpretation and critical analysis of this data vis a vis the best practices was undertaken, with a view to comprehend the problem and with an eventual aim of learning from these best practices so as to emulate them for other regions and states. Four such innovative approaches are studied.

1. Akshaya Patra: An Innovative Non Government Mid Day Meal

Programme:-

"Each school day, more than a million children in 6,500 schools across seven Indian states eagerly await the vehicle that brings their midday meal."

History: Akshaya Patra (Sanskrit: the "inexhaustible vessel"), began in 2000 as a small initiative of ISKCON-Bangalore. The temple cooks meals – called prasadam – for thousands of devotees on a daily basis. Mohandas Pai, director at Infosys Technologies, suggested to Madhu Pandit, chairman of ISKCON, that the temple take on the responsibility of feeding underprivileged children in nearby schools. Pai, who later became a program trustee, offered to bear part of the cost personally. Pandit agreed and the temple started cooking and distributing food to 1,500 students across five schools in the city.

The Meal: The meal typically includes rice or chapattis, sambar, or dal and curd, with 550 calories.

Cost: "In the last financial year [2008-9], the average cost of an Akshaya Patra meal was Rs. 4.68 of which the government funded around Rs. 2.64

The Kitchens: Unlike in most other midday meal programs, where cooking takes place at the school or in small set-ups, Akshaya Patra's kitchens are highly automated and centralized to allow for scale. This minimizes manual handling and ensures high standards of hygiene. Akshaya Patra has 14 such kitchens, each designed to prepare 50,000 or 100,000 meals per day. Two of its biggest – in Hubli and Bellary (Karnataka) – can cook 250,000 meals per day.

Kitchen Operations- Each Akshaya Patra kitchen is headed by two ISKCON missionaries and typically has 150 to 300 employees. The kitchens open at 2:30 a.m. and cooking starts at 3:00 a.m. The first vehicle carrying food rolls out at 5:30 a.m. It typically takes about five hours to cook 100,000 Akshaya Patra meals.

Akshaya Patra uses customized industrial steam generators and specifically designed vegetable cutting machines that can process hundreds of kilograms of vegetables per hour and can prepare up to 40,000 chapattis per hour.

Limitation: The large kitchens are not suitable for rural and other outlying areas. There aren't large enough numbers of children in smaller villages to make large-scale production feasible, and bad roads make it too difficult for food to be distributed

To remedy that, Akshaya Patra has also adopted decentralized kitchens. Under this model, the program identifies self-help groups of women in villages who cook

and distribute Akshaya Patra meals in small quantities. Akshaya Patra provides these groups with the ingredients and the required set-up by way of place, fuel and vessels. It also provides them with training in cooking, nutrition, hygiene and bookkeeping, and monitors them on a regular basis.

Such decentralized kitchens are located in Rajasthan, Orissa and Uttar Pradesh and extend to tribal-dominated communities in more than 300 villages. The decentralized model feeds around 50,000 children.

Impact of Akshay Patra Scheme:

Many studies have pointed out to the positive impact of the scheme. The outcome of a study carried out by Sigma Research Group, 2014, clearly establishes the positive impact of this mid day programme. Classroom hunger was addressed significantly, with

attendance and enrolment receiving a boost. The recommended nutritional requirements were being fulfilled and the food was healthy and hygienic too. Children were partaking the midday meal together, irrespective of caste, religion and economic status. This trend signified the importance of universalization of nutrition. (6)

Additional benefits: Apart from increasing penetration in rural India, Akshaya Patra's low-cost decentralized model generates jobs for women in remote areas.

2. The Lalitpur Experiment (7):-

A small experiment in the backward district of Lalitpur in Uttar Pradesh has shown that establishing a system of nearly universal reach with infants and young child feeding is possible through simple counseling by locally-trained women. Promoting breastfeeding and focusing on complementary feeding and education are crucial to improving nutrition status of children – under two years – and saving their lives.

Intervention: Uttar Pradesh has high infant mortality with high levels of under-nutrition and extremely low level of breastfeeding. It was keeping these factors in mind that the project 'Baby Friendly Community Health Initiative' (BFCHI) was initiated in 2006 and implemented in Lalitpur by the Department of Paediatrics BRD Medical College at Gorakhpur, UNICEF and the State government.

The experimental intervention focussed primarily on children below the age of two and the mode adopted was counseling for which 48 local graduate women were trained as mentors who in turn trained the ICDS Anganwadi workers, Accredited Social Health Activists (ASHAs) and traditional birth attendants.

According to Prof. K.P. Kushwaha, who led the experiment "Reaching the Under 2s – universalising

delivery of nutrition interventions in district Lalitpur, Uttar Pradesh" the project has demonstrated real convergence at the village level and heightened the motivation of workers to prevent malnutrition and morbidity associated with it in infants and young children. He believes establishing a nearly universal system is possible within two to three years through additional human resource and good quality training and supervision.

"Women can be identified and trained locally with some incentives. It is evident that real convergence between the National Rural Health Mission and the ICDS is also possible and by including medical colleges in the chain..

Impact: The pre-intervention (2006) and post-intervention (2007) showed a significant improvement in four feeding practices – reduction in pre-lacteal (giving some food before the baby is initiated to mother's milk) feeding from 44.4 per cent to 28.3 per cent, increase in initiation of breastfeeding within one hour of birth from 39.2 per cent to 57.9 per cent, exclusive breastfeeding for the first six months from 6.85 per cent to 24.9 per cent – and introduction of complementary foods along with continued breastfeeding between 6 and 9 months from 4.6 per cent to 35.8 per cent.

The independent evaluation in 2008 recorded further improvement in the feeding practices in which initiation of breastfeeding within one hour went up to 72 per cent, exclusive breastfeeding for the first six months to 50 per cent and complementary feeding along with continue breastfeeding between 6 and 9 months went up to 85 per cent while pre-lacteal feeds went down to 15 per cent.

3. The Velugu Project (8):-

The Andhra Pradesh's Velugu Project's Nutrition cum Day care centres run 317 nutrition centres across all 22 Districts. In a study it was found that there were 1221 babies born in 236 Centres that provided food to pregnant women and all basic care with support of Self Help Groups and a subsidy of Rs 8 per day from NRHM. There was significant improvement in safe deliveries and neonatal nutritional index.

Impact: The following impacts were observed:

- (a) 89% of women who delivered had a special diet for more than 3 months
- (b) 100% safe deliveries; 93% institutional one
- (c) 91% normal deliveries, Only 9% Caesarean Section
- (d) No child born with Low birth weight (<2.5Kg)
- (e) No record of maternal or neonatal death
- (f) Nutritious food for pregnant women and care, makes all the difference

This impact ensures better child growth, nutrition, immunity and survival.

4. Rajmata Jijau Malnutrition Project, Maharashtra (9):-

Maharashtra was the first state in the country to take a decision to tackle malnutrition in 'Mission - mode'. The first phase of the Health and Nutrition Mission was set up in 2005, and the second phase in November 2011. The aim of the Mission is to reduce child malnutrition in Maharashtra by focusing on the first 1000 days from conception, i.e. the period of -9 to 24 months.

Though technically under the Women & Child Development dept., in practice the Mission works as an autonomous technical and advisory body fully funded by UNICEF. It aims at improving convergence and coordination between Health and ICDS.

The Nutrition Survey (CNSM - 2012) conducted by IIPS Mumbai shows encouraging improvements in the nutritional status of children in Maharashtra over the last 6 to 7 years, with marked reduction in the incidence of under - weight, wasting and stunting in children below 2 years of age. This can be attributed to several initiatives under NRHM, the expansion of the ICDS network and the efforts of the Mission.

Political economy:-

Maharashtra has benefited from a fast growing economy. The NFHS-3 had showed poor malnutrition statistics. From its inception, the Nutrition Mission benefited from high political and bureaucratic leadership, the technical support of UNICEF and the engagement of all concerned, esp. the political commitment at the highest level.

Capacity and Financial resources:-

Four levels of training were part of the Mission activities at the state, district, block/PHC and village levels. Most of the Mission's work focused on ensuring that critical existing vacancies - particularly frontline workers and supervisors - were filled and that their knowledge, skills and motivation were improved. The technical support to the Mission's action was provided by UNICEF.

The financial resources came primarily from the state government. A stronger national impetus and increased central funding for scaling up ICDS and NRHM throughout India brought additional resources for programme action against child malnutrition.

Impact:-

Following a concerted state-wide effort over this period, in 2012, the state government commissioned a survey (IIPS 2012) to assess the progress made and identify priority areas for future action. The survey showed that

stunting in children under two years decreased from 39% in 2005-6 to 23% in 2012 (a 2.5 percentage point mean annual decline). Severe stunting decreased from 15% in 2005-6 to 8% in 2012. Critical improvements were also seen in use of antenatal care, breast feeding and complementary feeding practices, and use of iodized salt.

Suggestions : What India can Learn?

Based on the best practices of these innovative schemes, recommendations are put up to alleviate malnutrition, through charting a concrete agenda/roadmap for action. The above cited case studies prove that it is possible to make a positive impact on malnutrition. Three of these elaborate minor innovations in the existing government run programs (ICDS, NRHM). The Lalitpur Experiment brought in an invigorated training imparted to mothers by Medical College staff, Anganwadi workers and ASHA, that made a difference. The Velugu Project brings to the fore that nutritious food and basic care given to pregnant women with support of Self Help Groups and a small subsidy of Rs 8 per day from NRHM can help make a significant improvement in safe deliveries and neonatal nutritional index. Akshaya Patra brings to focus what an NGO could do wonders in contributing to the cause of combating malnutrition at school level, feeding lakhs of children. The Maharashtra Mission mode Rajmata Jijau Malnutrition Project, probably sums up under one umbrella, as to what ails the Indian government machinery and what is required to be done. Beginning at the top, the unstinted Political will (political & bureaucratic), provision of finance (government & UNICEF), correct technical support (UNICEF), training (government & UNICEF), a firm commitment to perform along with a sense of ownership and community participation, can transform a mediocre system into a dynamic top-grade result oriented machine.

CONCLUSIONS

Some committed people and organizations within the same administrative machinery have shown that it is very much possible to control malnutrition in a region or state. This needs strong commitment, political will, honest intentions, technical support and over all a zeal to perform. Simply put, if we have one such example of 'best practices' in each state of India, we would be able to put an end to malnutrition.

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