

# Nutritional intervention for poor children in the primary schooling system in Gujarat

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For many years, India had been a colony of the British Empire. Nonviolent resistance to colonialism under the leadership of Mahatma Gandhi brought independence in 1947. Since gaining independence, a succession of Indian governments worked to spur economic growth. Recent annual GDP growth of about 6.5 per cent helped the country reduce by half the proportion of people living on less than a dollar a day. Nevertheless, 80 per cent of India's population lived in rural areas, and poverty was concentrated largely in the regions which were often the most challenging to serve. According to a United Nations report, there remained many social needs to address in India, especially in the areas of health, primary education, and gender equality. Food insecurity and poor nutrition remain a problem in many developing countries and can have profound effects on children's health and their development. The Midday Meal Scheme in India is a programme covering primary school children to improve nutrition as well as increase educational enrolment, retention and attendance. This policy brief examines the effect of the scheme on nutrition and on children's learning. We find significant evidence of positive, protective effects, particularly for children growing up in communities affected by drought, suggesting there are substantial benefits of school feeding schemes for children's learning and development. My Research Paper Subject is Nutritional intervention for poor children in the primary schooling system in Gujarat.

## Historical challenges in Gujarat related to primary education and nutritional status of children:

### Primary education:

The main emphasis of Gujarat has been universalisation of primary education through a decentralized community driven process. Over the years, innovative measures like the Education Guarantee Scheme (EGS) have been adopted for universalizing access to primary schools. As a result of these strategies the Gross Enrollment Ratio (GER) in Primary Schools has risen from 76.5 per cent in 1996 to 96.2 per cent in 2000-2001.

However, even while the enrolment has increased the problem of retention persists. Only about 70 per cent of the children survive till the primary cycle with girls being the biggest casualty. The number of out of school children (which comprise of the never enrolled and the dropout children) in the age group of 6 - 14 years is as high as 13.28 lakhs, which is 11.2 per cent of the target population. The number of out of school girls is 7.2 lakh, which is 54.5 per cent of the total out of school children. Never enrolled children are 9.4 lakh; out of which 5.2 lakh are girls, which is 55.3 per cent of the total never enrolled children. The total dropout children are 3.88 lakh; out of which 2.04 lakh are girls, which is 52.6 per cent of the total dropout children (Source: Lok Sampark Aabhiyaan 2000 - 2001).

It is evident from the data above that a clear focus is required on out of school children *i.e.* the never enrolled and dropout category. Despite the universalisation of access and increase in the provisioning of infrastructure and teachers, the problem of retention, substantial reduction of dropout and improved learning levels of children remains. In rural government schools there are clear indications that poverty has a negative effect on all key educational indicators.

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Fig. 1. The mid day meal scheme in primary school

**Nutrition:**

The nutritional status of any population is a complex and composite entity, being a reflection of overall socio economic status and stratification, livelihood and food security, intra-household food distribution pattern, food related practices and dietary habits.

**Nutritional status of children:**

Anthropometric indices such as weight for age (indicating proportion of under weight children) and height for age (indicating proportion of stunted children) are commonly used to access the nutritional status of children in a population. According to both weight for age and height

for age, about half the children in Gujarat are malnourished and one fourth are severely malnourished. Besides, there are significant social disparities among social strata. Proportion of underweight (58.4%) and stunted (53.4%) children in rural areas is much higher than that in the urban areas, and similarly tribal children are worse off compared to other groups (Table 1 and 2).

The flow chart of ‘Ecology of Malnutrition’ above depicts the a vicious cycle of deprivation, with poverty, high birth rate, high death rate and malnutrition making the impact worse.

**Table 1.** Nutritional status of children in Gujarat

| Background characteristic | Weight for age<br>Percentage of children |               | Height for age<br>Percentage of children |                |
|---------------------------|--|---------------|--|----------------|
|                           | Below –<br>3SD                           | Below<br>-2SD | Below -<br>3SD                           | Below -<br>2SD |
| <b>Residence</b>          |  |               |  |                |
| Urban                     | 19.5                                     | 44.3          | 19.6                                     | 39.8           |
| Rural                     | 25.7                                     | 58.4          | 30.9                                     | 54.3           |
| <b>Caste/ Tribe</b>       |  |               |  |                |
| Scheduled caste           | 30.0                                     | 57.5          | 32.2                                     | 57.7           |
| Scheduled tribe           | 31.4                                     | 64.5          | 33.6                                     | 59.9           |
| Other backward class      | 22.4                                     | 55.4          | 28.1                                     | 51.5           |
| Other                     | 14.5                                     | 40.5          | 18.5                                     | 37.2           |
| Total                     | 24.3                                     | 55.1          | 28.3                                     | 51.0           |

(SD- Standard Deviation)

(Source: Gujarat (National Family Health Survey, 1998-99)

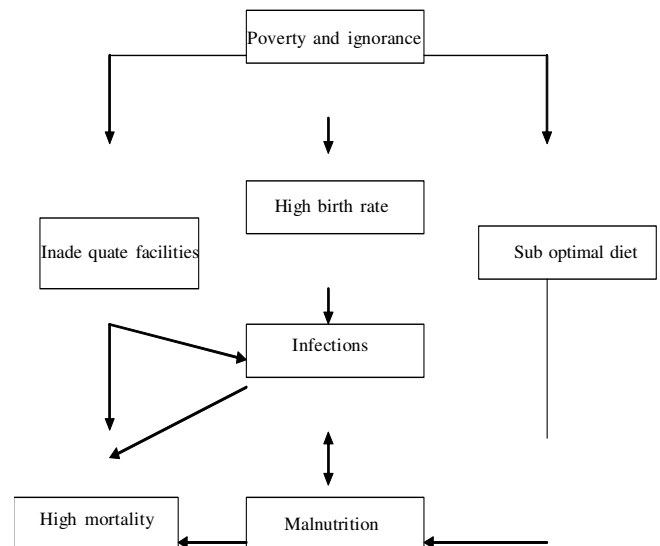


Fig 2. Flow chart pf ecology of malnutrition

**Table 2.** Nutritional status of children in tribal areas in Gujarat

| Sex   | Below -3SD  |             | Between -3SD & -2SD |             | Total below -2SD |          |
|-------|-------------|-------------|---------------------|-------------|------------------|----------|
|       | Wt. for age | Ht. for age | Wt. for age         | Ht. for age | Underwt.         | Stunting |
| Boys  | 42.5        | 53.0        | 31.6                | 21.7        | 74.1             | 74.7     |
| Girls | 41.3        | 54.1        | 32.9                | 18.2        | 74.2             | 72.3     |
| Both  | 41.9        | 53.6        | 32.2                | 19.9        | 74.1             | 73.5     |

(Source: National Nutrition Monitoring Bureau, NIN: Diet & Nutritional Status of Tribal population, Report on first Repeat Survey, 2000)

### Issues facing primary education and nutrition:

The primary education system needs to change focus from academics alone to all round development of children and take following issues into consideration:

#### *Social equity:*

Poor children face many problems in their childhood years, such as lack of nutrition, stunted mental development and reluctance to study. These attributes later lead to low achievement, high dropout rates and functional illiteracy. Primary school can tackle these critical deficiencies early and build a strong base for the child's successful learning.

#### *Socio-economic :*

Early childhood education increases the productivity of a child and in turn increases the probability of the child's success at school. In the later years, this may reduce social costs in areas such as school repetition and health education.

#### *Increasing literacy :*

Early child development programmes combine the objectives of education with health and nutrition. Primary schools are mostly in the form of 'day care centers' where children are taken care of and provided with the necessary minimum nutrition. Many children and specially girls don't attend school because they have to take care of younger brothers and sisters at home. The primary school thus gives them some free time, which they can use to attend school themselves and improve literacy.

#### *Low enrolment and high dropout rates :*

Primary school enrolment and attendance ratios are the most common indicators to measure the success of a primary education system. Net primary school enrolment ratios describe the percentage of primary school-age children who are registered in school. Primary school attendance ratios estimate the percentage of primary school-age children that are actually attending school. Another important indication of success of a school system is the student retention rate, which gives the percentage of enrolled children who reach a certain grade level

#### *Gender:*

A major concern is the gender and caste wise disparity in literacy. Girls face many obstacles in pursuing education,

including the traditional attitudes about female roles. They are often expected to make a critical contribution to household work and childcare. With the result, girls constitute major part of all children not attending school.

To address these issues there should be a compulsory enrolment of children at the age of 5 in primary schools. To ensure enrolment, retention, and address the concerns of poverty, social disparity, socio-economic divide and gender inequality, the mid-day meal scheme is an effective solution. There are a large number of NGOs working in the field of primary education. The synergy between the Government and the NGOs can also be utilized.

### Assistance by Government of India:

Grains for the revised arrangement will be provided through centrally assisted Mid Day Meal Scheme under the Guidelines issued by Government of India, Ministry of Human Resources Development, Department of Primary Education. The Central Government will assist by providing wheat/ rice (as may be required) at the rate of 100 grams per student per day from the nearest Food Corporation of India (FCI) godowns free of cost. The broad principles of allocation of food grains will be as followed by GoI are as follows:

- District is the unit of allocation.
- Allocation of food grains supplied through FCI by Government of India is made once in every quarterly cycle of three months periods.
- Based on the allocation made for each district by the Government of India the district Collector further allocates the entitlement of each school/local authority.

#### *Movement of food grains :*

- The District Collector are responsible for collection of food grains from the FCI godown and arranging transportation of food grains and distribution thereof to primary schools based on the entitlement of individual schools.
- The Central Government reimburses the cost of transportation of food grains from the FCI godowns to the schools/villages at the rate of Rs. 54 per quintal through Zila Panchayats for rural areas and to Nagarpalikas.
- The central support in the form of free food grains and reimbursement of transportation cost from the nearest godown of Food Corporation of India is available directly to the districts on the basis of district-wise details of

enrolment and attendance of students in primary schools.

*Administrative structure of the programme :*

At the state level, the programme is managed under Department of Panchayat and Rural Development for non tribal areas and Department of Tribal welfare for tribal areas. There is also a State Coordinator, Mid Day Meal Scheme, who is Additional Secretary, Rural Development and is also ex-officio Additional Secretary to Primary Education Department, Tribal Welfare Department, Urban Administration and Development Departments. A team of officers with related background assists the State Coordinator. The State coordinator, coordinates with Principal Secretaries, Panchayat and Rural Development, School Education, Tribal Welfare, Urban Administration and Development Departments, for the effective implementation and monitoring of the programme.

*Administrative network :*

The District Collector is responsible at the district level for coordinating and supervising the programme. The Chief Executive Officer, Zila Panchayat extends all possible help to the District Collector in the implementation of the scheme. The day-to-day functioning of the programme is carried out by the Chief Executive Officer, Zila Panchayat in the Rural areas and Chief Municipal Officer in the Urban areas. The officers of Education/ Tribal department assist them. At the District level, coordination is also established between functionaries of Rural Development, School Education, Tribal Welfare, Urban Administration and Food and civil supplies Department to ensure timely delivery of food grains to the primary schools, procurement of additional resources and monitoring the quality food grains and cooked meal. To ensure rigorous monitoring of food grain supplied and quality of cooked meal an officer/

functionary has been made in charge of each village, who carries out regular supervision. Besides, responsibilities have been drawn out for functionaries of various concerned departments at district and block level to carry out routine as well as surprise visits to primary schools to maintain strict vigil on quality of cooked meal. The district/block/village level functionaries have also been directed to ensure change in menu at regular interval, hygiene and maintain strict vigil on the quality of oil used for cooking food.

The menu committee has been constituted at the state level that prescribe weekly menu for all the schools. The menu had been made for 5 days, which included different combinations of wheat, pulses and rice. For the sixth day *i.e.* Saturday meal is provided to the children as per their request. It is same for all schools throughout the week. Five recipes namely Meetha Rice, Vegetable pulao, Dalia, Paushtik Khichri and Bakli are fixed for the MDM for the children from Monday to Friday. These recipes are given to the children by rotation every day. In 2007-2008 the scheme of MDM has been extended to upper primary schools. Almost same recipes are provided at upper primary level (Table 3) except increase in quantity level. The seasonal vegetables are used for cooking vegetable pulao. Thus the children are served hot mid day meal comprising of the specific stipulated ingredients. The details of menu with specific ingredients and cost are given in Table 3 and 4.

*Implementation agency :*

The implementing agencies of the programme at the primary school level are local bodies/authorities such as Gram Panchayats, Palak Sikshak Sangh (Parent Teachers Association) in Rural areas and local bodies in Urban areas. The responsibility of the implementation basically lies with the Headmaster of the primary school, the Sarpanch and representatives of the

**Table 3.** Nutritious recipies for primary schools

| Sr. No. | Menu             | Quantity (g) | Protein (g) | Calorie | Conversion cost per student per day excluding fuel, cooking, and labour charges |
|---------|------------------|--------------|-------------|---------|---|
| 1.      | Meetha rice      | 205          | 20.00       | 745     | 2.18  |
| 2.      | Vegetable pulao  | 210          | 21.00       | 703     | 3.35  |
| 3.      | Paushtik kitchri | 187          | 20.4        | 700     | 2.42  |
| 4.      | Paushtik dalia   | 195          | 21.7        | 729     | 2.00  |
| 5.      | Bakli            | 250          | 22.0        | 704     | 3.00  |

Total cost per child per day is Rs. 2.07 (including cook and fuel charges)

**Table 4.** Nutritious recipies for upper primary schools

| Sr. No. | Menu             | Quantity (g) | Protein (g) | Calorie | Conversion cost per student per day excluding fuel, cooking, and labour charges |
|---------|------------------|--------------|-------------|---------|---|
| 1.      | Meetha rice      | 205          | 20.00       | 745     | 2.18  |
| 2.      | Vegetable pulao  | 210          | 21.00       | 703     | 3.35  |
| 3.      | Paushtik kitchri | 187          | 20.4        | 700     | 2.42  |
| 4.      | Paushtik dalia   | 195          | 21.7        | 729     | 2.00  |
| 5.      | Bakli            | 250          | 22.0        | 704     | 3.00  |

Total cost per child per day is Rs. 2.17 (including cook and fuel charges)

parents. The provision of cooked food by the primary schools can also be done in association with the Non Government Organizations, Local Religious Institutions, Ashrams and Trusts etc.

Gram Panchayats, Palak Sikshak Sangh and Nagarpalikas have the flexibility to decide the menu of food to be provided to the students, subject to the food being nutritious and wholesome. To ensure that this stipulation is adhered to and proper hygiene and quality of cooked food is maintained, appropriate, supervisory mechanisms have been established at the local level. The major roles and responsibilities of Gram Panchayats, Palak Sikshak Sangh and local bodies are as follows:

- Procurement/Transportation of food grain from nearest PDS shop to the primary school.
- Finalization of menu in such a manner that maximum nutrition can be provided within the budget.
- To provide/establish institutional arrangements for providing cooked/pre-cooked food such as kitchenshed and arrangements for storage of food grain.
- Storage of food grain.
- Getting the wheat grinded.
- Purchase vegetables and ingredients such as fuel, salt, chillies, condiments etc., from the market and to ensure the quality of materials purchased is sound for children's consumption.
- Arrange for cook/helper for preparing food.
- To ensure that the cooks are provided the rations as per the strength of beneficiaries.
- To ensure that the food is cooked in hygienically clean conditions.
- To maintain regular record of inventory.
- To ensure that the quality of food supplied is as per children's liking and there is no wastage of material.

#### *Supervision and monitoring:*

The programme envisages monitoring of the programme at all levels. At the village level supervision and monitoring is carried out by local bodies / Institutions such as Village Education Committees, Palak Sikshak Sangh and Gram Panchayat. Besides, supervision is also carried out by the designated village level functionary and district and block level officers / functionaries of various associated departments from time to time. At the district level regular monitoring is done by the District Collector about proper implementation, lifting, transportation of food grains and quality of cooked meal being served to students. The District Collector also ensures proper coordination between various associated departments and defines their roles and responsibilities with respect to supervision and monitoring. At the State level, besides monitoring the lifting, transportation and utilisation of allocated food grain, regular monthly monitoring is carried on various

indicators of physical achievements of the programme.

These indicators include.

- The coverage of the programme in terms of reaching out to beneficiaries in Tribal (Urban and Rural) and Non tribal (Urban and Rural) areas.
- Coverage in terms of beneficiaries across both genders.
- impact on attendance, retention and dropout rate of children in primary schools.
- Nutritional status of children in primary schools in comparison to previous conditions.
- Contribution of the community in the effective implementation, supervision and monitoring of the programme.
- Level of monitoring ensured by the district authority.
- Livelihood linkages sought by associating SHGs with activities such as vegetable production, flour mill, production of spices etc.

For proper monitoring of the programme, a computerized Management Information System is being developed by the Department of Rural Development. To ensure flow and sharing of information and attract Funding Agencies, National and International donors to donate for this noble cause a website is also being developed.

#### *Evaluation:*

Concurrent to regular monitoring and effective supervision of the programme at all levels, it is proposed to carry out the evaluation of the scheme by external agencies. This will be supplemented by community level evaluation every six months, wherein the entire community would gather at the school premises to assess the social cost and benefit of the scheme on their children. This methodology of participatory evaluation by the community will ensure transparency. The activities undertaken and the processes adopted will be identified and assessed by the stakeholders in the presence of the entire village and facilitators. This exercise will lead to increased ownership of the community for the activities carried out, help in identifying gaps and review the action plan, wherever necessary.

#### *Budget:*

Food grains (wheat and rice) for the revised arrangement will be provided though centrally assisted Mid Day Meal Scheme under the Guidelines issued by Government of India, Ministry of Human Resources Development, Department of Primary Education. Besides this pooling of funds and convergence has been sought from the ongoing schemes of various departments such as Tribal Welfare Department, Panchayat and Rural Development Department, Department of Urban Administration and Development and Department of School Education. The funds required for the implementation of this phase have been sourced from Department of Tribal

Welfare, Pradhanmantri Gramodaya Yojana and Untied fund available with the Gram Panchayat/Gram Sabha under Department of Panchayat and Rural Development.

Positive fallout of the programme:

- About 15 per cent to 30 per cent increase in the attendance of the children in the primary schools
- This increase has been registered across both genders
- Increase has also been registered in enrolment
- One of the interesting fallout of the programme has been the increase in attendance of the teachers.

Expert Group Meeting on Supplementary Feeding Programme (including Mid-day Meal Programme).

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