

Malnutrition in Children of the Backward States of India and the ICDS Programme

Sanjeev Kumar

Introduction

Malnutrition is a widely prevalent problem in India and one of astonishing magnitude. According to the National Family Health Survey (1992-93), more than half (53%) of children below four years of age are undernourished. In 1998, 29.1% children between 1-5 years of age suffered from moderate and 12.3% from severe under-nutrition. Nutritional adequacy is one of the key determinants of the health and well being of the children. Under-nourishment not only retards physical development but also hampers the learning and cognitive process, leading to sluggish educational, social and economic development.

170 million children under six years of age constitute 17.5% of India's population (Census:2001). One in three of these children are born with low birth weight and are thus denied the best possible start in life. The high incidence of low birth weight compounded with inadequate care and restricted access to health services translates into high rates of child malnutrition and threatens the process of healthy development, culminating in a high infant mortality rate. India has a high IMR of 90 per 1000 children, with Orissa top with 96.7 IMR followed by MP (89.5), UP (84.4) and Rajasthan (81.2) (Registrar General: 2001).

ICDS, a major programme to tackle the problem of malnutrition and the ill health of mothers and children, was initiated in 1975, following the adoption of a National Policy for Children. This programme is now the single largest programme for the country's children with 4,348 operational ICDS Projects (GOI: 2001-02). Despite almost 30 years of its implementation, 47% or about 37 million children under three years of age are underweight in India (NFHS II: 1998-99). Furthermore, in the given hierarchical nature of the society the benefits of most development programmes are usurped by the better off sections, depriving the marginalised. This appears to be reflected in the implementation of ICDS as the mothers and children of scheduled castes and

scheduled tribes and those in backward areas, are much more vulnerable. The IMR among SCs and STs was found to be 83 and 84 respectively as opposed to 68 per 1000 live births for those of non-scheduled castes (Barik and Kulkarni: 2004). Backward regions all over the country have high levels of undernourished children. Even those living in relatively developed states lag behind in providing adequate nutrition to children but mainly because those regions are chiefly inhabited by the most vulnerable sections of the population (Sinha: 2005).

This paper aims to explore the extent of under-nourishment among children and to look into the functioning of ICDS in ameliorating malnutrition and educating mothers on health and nutrition issues in areas dominated by scheduled castes/scheduled tribes. The paper is the outcome of a study carried out in three backward states: Uttar Pradesh, Rajasthan and Orissa. In each of the states, three districts backward in terms of education, healthcare and economic development, were selected. These identified districts were Rampur, Ambedkar Nagar and Badaun in UP; Dungarpur, Banswara and Jhalawar in Rajasthan; and Sundargarh, Gajapati and Rayagada in Orissa. In each of these districts, two blocks were selected on the basis of maximum concentration of SCs and STs. Two villages from each block, on the basis of random sampling, were taken up for the study. Thus, 36 villages were covered.

A total of 80 samples (30 parents from each of the two villages, 5 community leaders, 5 medical doctors and 5 block officials), were selected from each of the eighteen blocks, making a sum of 1,440 samples for the entire study. The sample size for beneficiary/parents schedule was 1080. In each village 30 children were selected from an anganwadi centre for growth measurement. Both factual and opinion based information was collected from the respondents. The factual information mainly included indicators that were relevant for gauging the health and nutrition status of the

children, for example, their height and weight (which were measured to calculate the 'weight – for – age and height – for – age' indices of nutritional status), intake of mother's milk and also other supplementary and nutritive food. Opinion based information was obtained to enable an assessment of the functional effectiveness of the programme as well as the identification of factors that might help explain the malnutrition and present health status of the children.

The paper is organised in three sections. The first assesses the level of the prevailing under nutrition among the children, the second looks into the functioning of ICDS and the third deals with the extent of awareness on health and nutrition among mothers.

I

Level of Nutrition and Health Status

Level of Nutrition

Birth weights below 2,500 grams have been found to be very closely associated with poor growth, not just in infancy but also throughout childhood (Butt, et al:1996, Bavdekar et al:1994). In the study area 22.5% of all children were underweight and thus prone to retarded growth and poor health. Rajasthan with 32% underweight children was top followed by Uttar Pradesh with 18.3% and Orissa with 16.4%. The alarming level of malnutrition in Rajasthan is also consolidated by the Ministry of Women and Child Development, Government of India (GOI: 2001-02). The proportion of babies born with low birth weight reflects the poor condition of women, particularly their nutrition, not only during pregnancy but also during their adolescent and childhood.

Weight – for – age is a composite measure that takes into account both chronic and acute under-nutrition. As per this index the nutrition level is categorised into grades. The ICDS Growth Chart provides the weight - for – age 'Grade Classification' of the nutrition status indicating Grade I&II as moderately under nourished and Grade III&IV as severely malnourished. On the basis of this chart, 66.2% of all children of 0-5 years of age were under nourished, of which 23.1% were under grade III and IV, showing the severe extent of malnutrition. The highest number of children in Grades III

and IV were from Uttar Pradesh (27.1%), followed by Orissa (22%) and Rajasthan (21.1%).

Among children below 3 years age, almost 39% were under-nourished and 10.8% were in Grades III and IV having severe under-nourishment. In this age group Uttar Pradesh had the most severely malnourished children (20.6%) followed by Rajasthan (9.6%) and Orissa (7.3%). In the age group of 3-5 years, 72% children were undernourished. Contrary to the Grade III and Grade IV figures for below three years (10.8% children), in the age group 3-5 years as many as 38% children were severely malnourished. Statewise, the situation was poorest in Orissa with 47.2% children under Grades III and IV followed by Rajasthan with 36.7% and Uttar Pradesh with 32% severely under-nourished children.

The height – for – age index measures linear growth retardation. Children who are less than the standard measurement of the WHO estimates in terms of height – for – age are considered short for their age or stunted. The percentage in this category indicates the prevalence of chronic under-nutrition, which often results from a failure to receive adequate nutrition over a long period of time. The study revealed that overall about 36.8% of the children whose height measurements were taken, were short for their age or stunted. 32.9% in the age group below three years and 40.8% in the age group 3 to 6 years measured below the standard height. This percentage indicates the prevalence of chronic under nutrition among these children.

Despite better food grain production, the incidence of malnutrition is high in Uttar Pradesh, confirming the results of many studies that it is the availability of food grains and the proper care of children that account for good nutrition.

Mothers were asked to specify the health status of their sampled child. 12.3% of them reported poor and 0.8% (nine) very poor health. The children with very poor health were from Orissa. In the category of poor health, Rajasthan had the most children (19%), followed by Uttar Pradesh (10.6%) and Orissa (7.5%).

The data on under-nourishment and mothers' perceptions of their children's health indicate that the majority of under-nourished children below three years were in Rajasthan or Uttar Pradesh while the majority of 3-6 year olds with severe and chronic malnutrition were in Orissa.

58.4% mothers from all three states said that lack of nutritive food was the prime cause of poor health in their children. The second reason, stated by 16.2%, was the lack of medical facilities. 33.3% of mothers from Orissa considered the lack of nutritive food and poor medical facilities the main cause for poor health. In Uttar Pradesh and Rajasthan, 76.3% and 60.3% respectively, considered lack of nutritive food as the major reason for poor health. Lack of vitamin supplements, recurring illness, little age gap between children and pervasive poverty were other reasons given for poor health.

Community leaders and doctors also affirmed the poor health of children in their area. The main reasons were lack of education, poverty, unhygienic environment and carelessness and superstition among parents.

Feeding Practices and Healthcare

The way an infant is fed, is crucial to growth in the early months of life. Initially a child of this age must be exclusively breast-fed. Breast milk not only meets the child's nutritional requirements but because of its inherent immunological properties, it also offers considerable protection against diseases. In the study area, 82% of babies were breastfed immediately after birth. In Rajasthan almost all babies were breastfed immediately after birth. In Orissa 81% and in Uttar Pradesh only 65% were breastfed immediately after birth. The rest of the mothers did it two days to a week later. 93.4% infants were provided with breast milk as the first food intake.

The ideal duration of breastfeeding the child is up to two years of age. Almost 40% who breastfed their babies stopped breastfeeding before the child was two. In Uttar Pradesh a large number of mothers (68.9%) did not breastfeed regularly up to two years, compared to Orissa (58.1%) and Rajasthan (53.9%). The reason given by 32% mothers

for discontinuing breastfeeding before two years was the birth of the next baby. 30% mentioned that their child had started taking food so they stopped breastfeeding him/her and the rest of them were not aware of the importance of breastfeeding.

II

Efficiency of ICDS

Supplementary Feeding

Adequate food and good feeding practices are essential for the normal growth of a young child. Malnutrition is clearly linked to inappropriate feeding practices rather than just to food availability or household food security. ICDS/anganwadi centres are supposed to provide supplementary feeding and inculcate good feeding practices among mothers. Supplementary feeding should be introduced at around 6 months of age in addition to continued breastfeeding up to two years of age. This attempts to bridge the calorific gap between the national recommended and average intake of children in low-income and disadvantaged communities. Supplementary food is also essential for pregnant and nursing mothers. In the study area 53.1% of mothers of selected children received supplementary feeding from the anganwadi centres, both during the pregnancy and up to six months after delivery. 18% of all interviewed mothers did not get any supplementary feeding. Orissa had the highest number of mothers with supplementary diets both during pregnancy and up to six months after delivery.

In response to a query on the nature of the food provided, 93% mothers who received additional supplementary diet from the anganwadi centres mentioned that they received readymade cooked food. In Rajasthan and Uttar Pradesh, all the women and in Orissa 81% confirmed this. In Orissa 17.5% women received food cooked at the centre and 1.5% got some other kind of food. They were provided with this additional food once a week.

The performance of anganwadi centres in providing supplementary food to children was better. Unlike the mothers, 100% children in three states got supplementary food. Children below three years of age were provided with take-home rations once

a week or month whereas children aged 3-6 years were provided with cooked food at the centre daily.

Each child should be provided with 70 – 75 grams of food per day and pregnant or nursing mothers should receive about 150 grams of supplementary food per day. However, the actual quantity provided was less than this.

According to ICDS norms, identified severely malnourished children, those placed in Grade III and Grade IV, should be given special supplementary feeding which may be therapeutic in nature, or just double rations, and should also be referred to medical services. However, since the nutritional status of the ICDS children was rarely recorded or categorised in different grades as per the growth chart, no variation in the quantity of food given to these children was observed. All the children were provided with the same quantity of food.

Growth Monitoring

Growth monitoring is another important activity that is supposed to be operational at anganwadi centres under one of the many ICDS functions. It is important for assessing the impact of health and nutrition-related services and enabling communities to improve the same. As per ICDS guidelines, children below three years of age should be weighed once a month and children 3-6 years of age quarterly. Weight for age growth cards are supposed to be maintained for all children below 6 years of age. These help to detect growth faltering and to assess nutritional status. In all three states, it was found that the children's age for height was not recorded anywhere. However, at some centres, the Anganwadi workers did maintain a record of the children's weight. The growth charts were available at 72% of the anganwadi centres. More than 97% of mothers in Orissa confirmed that the Anganwadi workers maintained the growth-charts. In Rajasthan 71.4% and in Uttar Pradesh only 47.4% respondents reported maintenance of growth charts. Thus in terms of growth monitoring, Orissa performed best and Uttar Pradesh worst. These results were also confirmed by the doctors. 40% doctors said that the records of age for weight were not maintained. These doctors were mainly from Uttar Pradesh. The reasons given were

the unavailability of weighing machines and growth charts, negligence and superstitions of mothers about recording their children's weight. In response to another question, around 80% mothers stated that anganwadi workers showed an interest in the children's growth related problems.

Immunisation

Immunisation against poliomyelitis, diphtheria, pertusis, tetanus, tuberculosis and measles is an integral part of the services provided under ICDS. The respondents were asked about all six prescribed vaccines / immunisation given to their children. All mothers confirmed that some vaccines were given to their children but they were not aware of the names or nature of immunization. Discussions with doctors and field workers confirmed that all the ICDS children were given the prescribed six vaccines.

Immunisation of pregnant women against tetanus is also supposed to be done under ICDS. The anti-tetanus vaccine reduces maternal and neonatal mortality. Out of the total sample of 1080 women, the majority (96 to 99%) did get some vaccine but they were not aware of the name or nature of the vaccine. Workers and doctors said that these women were given the tetanus vaccine. Out of those who were not administered the vaccine, three reported that they did not get the time to go to the health centre, three complained that the vaccine was not given at the centre and two were not aware of any such vaccine.

Health Check-Ups

This component of the ICDS Programme includes healthcare of children less than six years of age, antenatal care of expectant mothers and post natal care of nursing mothers. For up to six months the mothers were asked about health check-ups for them and their children by the Auxiliary Nurse Midwife or Lady Health Visitor. About 95.2% of mothers, varying from 92.8% to 99.4% across the three states, confirmed health check-ups of both mother and child after delivery and reported that they included general physical check-ups, vaccination, iron and vitamin tablets and measuring the weight of the mother and child. The majority of these women reported health check-ups

once a month which were done either at the near-by PHC or at the anganwadi centre. The women whose health checkups were not conducted generally complained of irregular and rare visits of the ANM to their village or said that they did not get time to go to the health centre. Overall, the three states were delivering health check-up services satisfactorily.

III

Awareness about Nutrition & HealthCare

All the women respondents had heard of ICDS programmes or anganwadi centres. With the exception of four women from Orissa, all were aware of some or other of the facilities.

On asking about various topics on which the anganwadi workers provided information, around one-fourth mothers were not aware of healthcare and immunisation services. Forty% were not aware of breastfeeding for the child. A large number of mothers were not aware of minor illnesses and their treatment (95.3%), the necessary supplementary diet (75.6%) or referral facilities by the centre (76.6%).

This shows that much more still needs to be done to impart awareness of the various facilities provided by the centre, so that the target group can benefit from them. The factors causing malnutrition, and its consequences need to be highlighted while imparting awareness regarding health and nutrition. About half the doctors were not satisfied with awareness levels for these factors.

Training and sensitisation of health workers is imperative for effective service delivery. About 67.7% of the 90 doctors interviewed reported that a monthly meeting of ANMs/Health Workers is called to give the latest information about the nutritional aspects of children in the age group of 0-6 years, as well as pregnant and nursing/lactating mothers. Health workers are supposed to organise meetings of pregnant and nursing mothers to impart education on various aspects of health. According to 92 to 96% women with children below three years of age, the anganwadi workers organise meetings and interact with the women. In Uttar Pradesh, interaction

and communication was poor. About 39% of women from Uttar Pradesh complained that there no such meeting was organised.

Finally respondents were asked if they benefited from the information imparted to them on nutrition and health and also the extent of this benefit. Apart from seven mothers from Orissa, all benefited from the information imparted by centre workers. However, a majority 74% were only marginally benefited.

Conclusions

The study shows the high extent of under-nourishment and less than satisfactory performance of ICDS. Around one fourth of children were born under weight. Uttar Pradesh had the highest number of severely malnourished children below three years of age. The higher percentage of severely malnourished children in the upper age group of 3 to 5 years reflects the chronic nature of under-nourishment. Despite a pioneering start by ICDS, Orissa faced the greatest severe and chronic under-nourishment. The height – for – age index shows stunted growth of 36.8% children. It also confirms higher chronic and severe under nutrition in the upper age group (3-5 years). The extent of severe under-nutrition was higher in Uttar Pradesh and Rajasthan while severe under-nutrition of a chronic nature was higher in Orissa. This reflects the need to provide a regular and adequate diet to children, especially in Orissa. The high percentage of undernourished children in Uttar Pradesh where there is better food production shows the need to educate mothers on proper feeding practices.

Breastfeeding children immediately after birth is practised by most mothers in all three states, indicating good performance of the programme in terms of inculcating breastfeeding practices. Providing less than the prescribed supplementary food indicates flawed implementation and implies a fanning off of the allocated quantity of food. This calls for more transparent functioning of the programme.

Because weighing machines and growth charts were not available, regular growth monitoring was not done. Consequently children with severe malnutrition were not identified and were not grouped into different

grades as per the growth charts. Thus, in none of the states was the prescribed special treatment given or referral services used for severely malnourished children, which not only shows faulty implementation but also suggests poor supervision and neglect regarding the very purpose of the ICDS programme.

ICDS workers conducted vaccination and health check-ups. However, because they did not provide adequate awareness on health and nutritional aspects to parents, most of them only benefited marginally. A lot more has to be done to improve the efficiency of the programme and ameliorate malnutrition and ill health. A rigorous monitoring of the implementation process and a concerted effort to make the programme more participatory by involving the local people, would go a long way to helping its functioning and reducing widespread under-nutrition.

References

1. Barik, Vijay K & Prushottam Kulkarni (2004), *Health Status and Access to Healthcare Services: Disparities among Social Groups in India*, IIDS, New Delhi, in Sinha, S. (2005): *Reaching Out to Under-nourished Children: Social Inequalities and Child Development*, Ministry of Human Resources, GOI

- Policy Perspectives, *Journal of Health and Development*, Vol.1, No. 3-4, 2005
2. Bavdekar, A. R. et al (1994), *Catch-up Growth and its Determinants in low birth Weight Babies*. *Indian Paediatrics*, Vol. 3, No. 1, 1994, 1483-1490.
3. Butte, N. et al (1996), *Human Milk Intake and Growth Faltering of Rural Mesoamerindian Infants*. *American Journal of Clinical Nutrition*. 55, 1996, 1109-1116.
4. *Directory of ICDS Projects*, Department of Women and Child Development, Ministry of Human Resource Development, Government of India, P.175
5. *Government of India (2001-02)*, Department of Women and Child development, Ministry of Human Resources, GOI
6. *National Family Health Survey I (1992-93)*, International Institute of Population Services, Mumbai
7. *National Family Health Survey II (1998-99)*, International Institute of Population Services, Mumbai
8. Registrar General (2001), *Sample Registration Bulletin*, Census of India, GOI, April, pp.1-6
9. Sachidanand Sinha (2005), *Reaching Out to Undernourished Children: Social Inequalities and Policy perspectives*, *Journal of Health and development*, Vol.1, No. 3-4, Oct-Dec. 2005.

Acknowledgment: The Paper is based on a study sponsored by the Department of Women and C