Nutritional Status of Children in Delhi: A Reality Check

A synthesis of field experiences and studies on prevalence and factors of malnutrition in Delhi
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Pardarshita

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Contents

Acknowledgement 3
Executive summary 4
Background 6
Situational analysis 8
Prevalence of Malnutrition 12
Factors responsible for Malnutrition 14
  - Socio-cultural & Economic reasons 14
  - Status of service delivery: ICDS & Nutritional Rehabilitation Centres (NRC) 16
  - Health services 18
  - Water and Sanitation 19
Diseases & Malnutrition 21
Key recommendations 23
Glossary 24
References 25
Executive Summary

The aim of the report is to explore the extent of malnutrition among children in the age-group of 0-5 yrs in urban (NCT of) Delhi and analyze the causative factors of its existence; and recommend pointers to address the issue at various levels. The report is a synthesis of CRY’s experience of working on malnutrition in the State and is drawn from commissioned studies, partner-level reports, data and secondary information. Along with medical assessment (measurements), socio-economic and cultural factors were also analyzed which affects nutritional status among children. Therefore the report incorporates a mix of methodologies which includes questionnaire to obtain quantitative data; focused group discussions, interview schedules, and through observations with the service providers i.e. ICDS functionaries and doctors of health centres.

Experiences from intervention over the years clearly indicate the existence of malnutrition among children in the city. It was a point of reflection for all those who were denying the fact stating that it is not possible as there exists a gamut of services and welfare programmes in the area, giving attention to the child right from conception. It was contested that a lot of schemes and programmes exist for expectant mothers by welfare and health department, safe delivery is ensured by the hospitals, health centres/ personnel spread over the entire capital region, whole Delhi has been provided coverage by the ICDS, a scheme offering nutritional and non nutritional services, public delivery systems providing low cost grain to the lower income group, mid day meals being given in schools etc. However, the progress in reducing proportion of malnourished children over the last decade has been modest but slow. Therefore the situation called for a deeper analysis of the whole context in a holistic manner and not a sum of parts.

Key findings

- Based on CRY partner’s primary data generated in December 2013, 3650 children (1863 boys, 1787 girls) covered under growth monitoring process in urban slum areas of Delhi (NCT):
  - Out of total children covered under growth monitoring process 1300 children (626 boys and 674 girls) children were found to be malnourished (36%).
  - Overall malnutrition among girl children (38%) was higher than the boys (34%).
  - Out of total malnourished children, 33% children are in Severely Acute Malnutrition (SAM) category. Rest 67% were found to be moderately malnourished (MAM).
  - Overall malnutrition higher in North-West district (51%). 56% girl children out of total 0-5 yr children were found to be malnourished.
  - There is highest percentage of SAM children in South-West district. 16% out of total 0-5 year children were found to be SAM. Out of total 0-5 yr children 19% girl children were found to be SAM as against 13% boys.
  - Most of the undernourished children were not exclusively breast fed, less breast fed or were initiated supplementary nutrition at a much later period.
• In terms of coverage ICDS is catering to just approximately 30% of the total 0-6 yrs of population of children in Delhi.

• Though 11 Nutritional Rehabilitation Centers have been operational, functioning of these NRCs are very dismal as severely acute malnourished (SAM) children are hardly availing referral services for their immediate care and treatment. In most cases, Aanganwadi workers are unaware about availability of such centers and its services.

• Poor infrastructural facilities in AWC such as shortage of space, difficult approachability, ill ventilated – suffocating rooms, cramped unhygienic places, no space for outdoor activities hampering the quality of service delivery.

• In absence of Community awareness, socio-cultural practices such as lack of exclusive breast-feeding, early age of marriage, gender discrimination contributes to child malnutrition.

• In cases where both the parents are working (especially in low-income/marginalized groups) often young children are left behind at home and are not properly looked after, making the child more prone to malnutrition.

• 52 per cent of the children living in slums and unauthorized colonies defecate in the open along with lack of safe drinking water facilities, leading to frequent prevalence of water-borne diseases.
Background

The progress made with regard to malnutrition among the children residing in urban areas has been slow over the years, because of rapid increase in urban poverty and poor health environment in the urban slums. The urban population is rapidly expanding because of large-scale migration to cities for a possible better life. The cities and towns are also expanding, but the sheer volume of people compromises the ability of the city to meet their basic needs. A large proportion of this migrating population ends up residing in slums in inhuman conditions. The ongoing process of rapid urbanization has deleterious repercussions on health and nutrition especially for children. Malnutrition in young children has long-term negative effects on physical and cognitive development. Addressing nutritional problems of urban poor is therefore must for overall development of the country. (Ghosh & Shah, 2004)

However, the people who move in to access these opportunities tend to remain on the socio-economic margins, struggling to meet the most basic requirements of life and livelihood. One of the most intense struggles is for food. In recent times there has been some attempt to highlight the extent of malnutrition among the poor, but the focus has largely been on rural areas. The urban situation remains under-explored.

Malnutrition in Delhi

Delhi may be one of the biggest metropolises in the world with a population of around 18 million, but nearly half its people live in slums and unauthorized colonies with about 49% of the total population of Delhi lives in slum areas, unauthorized colonies and about 860 jhuggi-jhonpri clusters with 4,20,000 jhuggies.¹

The most vulnerable in these urban slums are children; especially newborns and infants (0-36 months) whose health entirely depends on the availability of the mother to breastfeed, the ability of the care taker and household to provide nutritious meals, the quality of the public healthcare system and overall community support.

As per Census 2011 there are 19,70,510 (Male-1055735 and Female- 914775) below six years of age in Delhi. This age group is the 'window-of-opportunity' where the foundation for physical and cognitive growth potential is established. Despite it being widely known that after 36 months, the long-term effects of malnutrition are irreversible, mainstream efforts to reduce malnutrition is mainly targeted at children between 3-6 years. One example is Supplementary Nutrition Programme offered to children aged 6 months-3 years and Pregnant Women and Nursing Mothers under Integrated Child Development Scheme. According to the World Bank, ICDS has not sufficiently reached children under 3 and overly focused on supplementation when child malnutrition is actually multi causal.

We can see in the given box which provides a brief about Delhi Development Report 2009 which says that “there is a high morbidity rate of 11-15 per cent for children with numbers of annual episodes of diarrhea range from 6-12. Diarrhea is responsible for about 60 per cent deaths in children followed by ARI (27 per cent).”

Nearly 31 per cent of the population living in JJ clusters, unauthorized colonies and villages of various categories and does not have access to the piped water supply and sewerage system.

The report further says that “Delhi represents a widely varying populace and correspondingly a widely varying disease pattern ranging from lifestyle diseases on the one hand to the infective and malnutrition related diseases on the other.”

Approximately 15 per cent people of Delhi’s population live in slums under conditions of overcrowding, poor environmental sanitation, very little or totally non-existent infrastructure facilities like sewage lines, potable water, drainage systems with an alarming degree of crime and other maladies arising out of a poor socio-economic situation.

There is a high morbidity rate of 11-15 per cent for children with numbers of annual episodes of diarrhea range from 6-12. Diarrhea is responsible for about 60 per cent deaths in children followed by ARI (27 per cent). Children are especially trapped in the vicious cycle of malnutrition and poor immunity. Slums have the highest proportion of people with low body weight and severe malnutrition.

The above given points provide us a multi-factorial aspect related to child malnutrition. Fighting child malnutrition necessarily means addressing all its causes in an integrated manner.

**Universe of the report:**

The reality check is based on our experiences of working on malnutrition in Delhi, with particular reference to children between 0-5 years in 5 districts and 21 wards/ blocks, who have been covered in the ambit of the report.

<table>
<thead>
<tr>
<th>Name of the Districts covered</th>
<th>No. of Wards / Blocks</th>
<th>Total Children covered under Growth monitoring process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>5 South West, West, North West, North East and North</td>
<td>21</td>
<td>1863</td>
</tr>
</tbody>
</table>

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Situational analysis

Urban poverty and slums are the most critical problems of urban development that Delhi faces today. These inhabitants are service providers or the informal sector, which includes domestic help, hawkers and vendors, rickshaw pullers, low paid workers in the industrial, trade/business sectors etc. They have socio-economic constraints to income which pose constraints to their food and other basic necessities including shelter, good health and clean environment and surroundings. The cities and towns are also expanding but the sheer volume of people compromises the ability of the city to meet their basic needs.

A large proportion of this migrating population ends up residing in slums in inhuman conditions. As a result, urban poverty and hunger are increasing in many developing countries. (Ali, 2003). While there exist a variety of policies and programs for slum development, health, status of women, employment and nutrition, there is a considerable scope for making them more effective in improving health and living conditions of the urban poor. The key problems relate to the rapid increase in the population of slum dwellers which outstrips the meager resources and services available for them.

The present approach to tackle urban poverty is a ‘three pronged strategy’ formulated in 1990-91 by the Slum and JJ department of MCD by providing some civic and basic amenities like water supply, drainage for waste water, community bath, community latrine, street lighting poles, community centers, dispensaries, non-formal educational centre, widening and paving of lanes.

But these strategies are only “curative rather than preventive”, they are temporary, and does nothing to actually create availability of new low cost urban housing. Clearance and Relocation forms the mainstay of the MCD’s strategy towards slum dwellers, is based on the premise that slum dwellers are ‘encroachers’ on public land and thus they must be cleared. This premise itself is flawed, as the lack of low cost housing, which induces slum dwellers to ‘squat’ in the first place, owes to artificial scarcities created by policies such as forced acquisition of land via land banking. Resultantly, slum dweller forced to live in inhuman condition in scanty habitations which lack basic service of safe drinking water, hygiene condition, health services etc.

Child Health and Nutrition

The ongoing process of rapid urbanization has harmful repercussions on health and nutrition especially for children. Malnutrition in young children has long-term negative effects on physical and cognitive development. Addressing nutritional problems of urban poor is must for overall development of the country. The first six years of life (and especially the first two years) have a great and lasting influence on the quality of life of a human being. The health, nutrition, education and development opportunities given to a child at this stage to a large extent determine his or her health and wellbeing for the entire lifetime.

The care of young children cannot be left to the family alone – it is also a social responsibility. Social intervention is required, both in the form of enabling parents to take better care of their children at home, and in the form of direct provision of health, nutrition, pre-school education and related services. Interventions for children under six years (early childhood care and development, or ECCD for short) must broadly address at least three dimensions: child health, child development/education and child nutrition. These must necessarily be provided simultaneously in
the same system of care. Further, while planning for provision of early childhood care and development, it must be kept in mind that different age groups require different strategies. The three crucial age groups are: (1) children 0 – 6 months of age – the period of recommended exclusive breastfeeding, (2) children 6 months to 3 years – until entry into pre-school, and (3) children 3 years to 6 years – the pre-school years, until entry into school. (Strategies for Children under Six, 2007)

A healthy mother who herself receives adequate nourishment, care and mental peace at home will give birth to a healthy child. A malnourished mother often gives birth to an underweight child who grows up to be a malnourished adolescent, and in the case of girls perpetuates the cycle of malnutrition by giving birth to a low birth weight baby. It is also important that simultaneously there are interventions to ensure nutrition of adolescent girls and women, and for women’s access to care during pregnancy, and this has been the rationale of the ‘life-cycle approach’.

It is recognized that the overarching determinants of malnutrition include not only gender inequality, but also poverty. Poverty impacts malnutrition in multifarious ways – by reducing purchasing power for good quality nutritious foods, by reducing access to health care, by giving rise to physical environments of lack of safe water and sanitation and by impact on education by not able to send their children to schools. Poverty also affects the environment in various ways by forcing poor people to degrade environment around which they live.

Child deaths are a tragedy not only for the child but for the whole family. Moreover, insecurity about child survival often leads families to have many babies in succession, which further affects the health of women and children. The common causes of death i.e., diarrhea, pneumonia and fevers are the most prevalent diseases identified among slum children besides nutritional deficiencies. Low birth-weight also plays a major role in the transmission of malnutrition from one generation to the next: malnourished mothers have low birth-weight babies who carry the burden of malnutrition themselves as they grow up and become malnourished mothers in turn. Marriage at a younger age puts adolescent girls at a greater risk of giving births to a still born child or one who is premature or has low-birth weight. ICMR Task Force National Collaborative study revealed that mean age at marriage of slum women is 13.8 years and age at consummation of marriage is 16 years (Awasthi & Aggarwal, 2003)

A typical slum cluster in Delhi comprises of small one room houses or makeshift shanties, in which the number of people living inside extend the capacity of the room. The Children living in the urban slums are exposed to ambient as well as indoor pollutants. The surroundings are stinky, filthy with open drains, improper sanitation, and more number of people living in the cluster as compared to the availability of total municipal services. The lack of adequate knowledge, awareness, and education force the poor to face extremities of poverty. In many cases, they are not able to take care of their family because their income is disproportionate to the number of feeding mouths. This brings dissatisfaction and agitation among the parents and elders, which affects the childhood of the children in the families.

**Rearing and Nurturing Practice for Children**

It is recommended that breastfeeding should begin immediately after childbirth and infants should be exclusively breastfed for the first six months of life. After six months, adequate and appropriate complementary foods should be added to the infant’s diet in order to provide sufficient nutrients for optimal growth. It is recommended that breastfeeding should continue along with
complementary foods, through the second year of life or beyond. It is further recommended that a feeding bottle with nipple should not be used at any age, for reasons related mainly to sanitation and the prevention of infections.

Studies have shown that exclusive breastfeeding alone provides the nutrition that meets all the infant’s requirements in this age group. It has also been shown that this is the only preventive and the best treatment for the major killers during the neonatal period (e.g. diarrhea, pneumonia and sepsis). Starting breastfeeding within one hour of birth can help reduce the risk of neonatal mortality by almost a third. Universal coverage of exclusive breastfeeding up to six months of age can save 13 – 15% of all under five deaths, i.e. more than 3.5 lakh children each year for India. Women in slums work outside their homes; in factories, shops, or as unskilled laborers and domestic servants. These categories are not protected by labor laws regarding maternity or sick leave, hours of work, etc. This occupation pattern of working women in urban slums has a propensity to erode breastfeeding and childrearing practices. Infants are often taken care of by the older siblings. (Rameshwar Rao, 2004 and Sangole & Durge, 2002)

According to Ghosh and Shah in their research on malnutrition in a resettlement colony of Delhi, usually the majority of children are first put to breast on the 3rd day after birth and Colostrum is discarded in up to 90% of children of the urban slums. Use of pre-lacteal feeds is almost universal. Use of feeding bottles, animal milk and commercial milk formulae for feeding the young infant is very common. When animal milk is given, most people add plain water to the animal milk in ratios up to 3:1. Those giving their infants formula milk also dilute it excessively. Among the children who use bottles: most people have only 1 bottle and 1 nipple which is seldom cleaned properly. Introduction of complementary foods is delayed and the foods lack the consistency, energy density and fed in inadequate amounts and in unhygienic ways. The consumption of ready-to-eat’ convenience’ foods is increasing among slum dwellers as both the man and the woman of the household have to observe rigorous working hours. Inexpensive imitations of ‘fast foods’ pose problem of contamination in such cheap fast-food.

Scant available data from urban slums suggest that the most common causes of malnutrition include poor maternal nutrition at conception and in utero undernutrition resulting in low birth weight, inadequate breastfeeding, delayed and insufficient complementary feeding, impaired utilization of nutrients due to infections and parasites. (Ghosh & Shah, 2004)

Ghosh and Shah in their recommendations suggest that it has to be ensured from the seventh month onwards that the complementary foods are to be introduced to children, along with continued breastfeeding for two years or beyond. Children can eat ‘normal home’ food (in mashed or semi-solid form), however children at this age can eat only small quantities at a time and therefore need to be fed many (about five) times a day and need to be given food that has adequate calories, proteins and micronutrients. This food has to have adequate nutrients in the form of animal proteins (milk, eggs, meat, fish), adequate in fats, fruit and vegetables. This requires nutrition counseling and nutrition and health education sessions for mothers and family members. Further, children in this age group require regular immunization and growth monitoring, treatment for anemia and worms, prompt care for fever, diarrhea, coughs and colds and referral services for the sick and severely malnourished child.

High prevalence of malnutrition among young children is also due to lack of awareness and knowledge regarding their food requirements and absence of a responsible adult care giver. The period of 6 months to 2 years when the child is dependent on someone to feed him/her can mostly
be found under-nutrition or lacking in timely growth and development. Also, there are many taboos and beliefs regarding foods suitable for a child without any scientific basis. Absence of household food security, inadequate preventive and curative health services, insufficient knowledge of proper care and discriminatory practices regarding food distribution add to the problem.

Counseling and education should be made integral part of any breastfeeding support program. But there is a requirement of organization, intensive training, highly motivated staff and generation of additional resources but simultaneously for an intervention to be effective, it is important to know how well and by whom it is implemented rather than what specifically is implemented.

According to Right to Food Campaign, food and nutrition security or the 'Right to Food' is usually interpreted to mean adequate availability of food for the country as a whole. Food production alone cannot ensure food security. Also India still lacks in developing the correct measure of poverty. Thus the richer or the middle class take advantage through schemes like PDS. The availability of adequate food at the household level does not necessarily imply that the food is distributed to members according to their physiological needs. The worst sufferers in this regard are women of childbearing age and children. Faulty intra-familial distribution of food and faulty choice of food contribute to a considerable part of under nutrition in children and women in poor urban households.

A significant proportion of low birth weight deliveries and infant malnutrition may also be related to lack of awareness of the special nutrient needs of pregnant women and children. By imparting vocational skills, the income generating capacity of the urban poor can be raised, thus ensuring their nutrition security. City governments should also pay attention to urban agriculture. (Ghosh & Shah, 2004)

Ghosh and Shah clearly state that, urban poor do not benefit much in terms of nutrition by migration from rural areas in spite of better employment opportunities and healthcare facilities likely to be available in urban areas. Proper implementation of antipoverty income-generating programs all designed to check migration of the rural workforce to urban areas assumes great importance and should be coordinated with other on-going health/nutrition/economic and education programs primarily focused on urban slums and their neighborhoods. The action plans should be free from vote bank politics. It is desired that the political leaders direct their energies in more constructive manner and organize the services for upliftment of the urban poor.

Another issue is that there is poor understanding about early childhood across the country and in all strata of society. Not many are familiar with scientific facts about the critical importance of early childhood in the development of a human being. This has led to indifference and rampant neglect on the part of the government, and also at the level of community involvement.
Prevalence of Malnutrition

Status of malnutrition in Delhi is relatively not good when there are 26.1 per cent of under-weight; 42.2 per cent of stunted children and 15.4 per cent of wasted children (all under five years) who have been categorized on the basis of their nutritional status.

The consequences of child malnutrition for child morbidity and mortality are enormous and there is an adverse impact of malnutrition on productivity so that a failure to combat child malnutrition reduces potential economic growth at the macro level. At the micro level, malnutrition both protein energy malnutrition and micronutrient deficiencies directly affects children’s physical and cognitive growth and increases susceptibility to infection and diseases.

It is obvious that there is urgent need to focus on the nutritional and overall developmental needs of children. The golden interval for intervention is believed to be from pregnancy to 2 years of age, after which under nutrition may cause irreversible damage for future development. Poor foetal growth or stunting in the first two years of life leads to irreversible damage. Inadequate cognitive or social stimulation in first two to three years has lifelong negative impact on educational performance and psycho-social functioning. India is one among the many countries where child malnutrition is severe and also malnutrition is a major underlying cause of child mortality in India.

**Weight/Age- Under Weight**

CRY partners in Delhi have been undertaking growth monitoring of 0-5 yr children in their intervention areas in Delhi covering 05 district i.e. South-West, West, North-West, North-East and North. Out of a total of 4851 children (male=2470, female=2381) under 0-5 years, 3650 children (male=1863, female=1787) have been covered under regular monitoring to assess their nutritional status.

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3 Children in India, 2012: A Statistical Appraisal, Ministry of Statistics and Programme Implementation
Analysis of the children covered under growth monitoring (as given in table below) suggests a high (36%) percentage of malnutrition (for all grades) among slum children.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Children 0-5 Yrs</strong></td>
<td>1863</td>
<td>1787</td>
<td>3650</td>
</tr>
<tr>
<td><strong>No.s of Malnourished Children</strong></td>
<td>626</td>
<td>674</td>
<td>1300</td>
</tr>
</tbody>
</table>

It is alarming to notice that SAM out of total malnourished children identified is 33%. It can be seen that the number of malnourished girl children are higher than the male children, which might also have socio-cultural inferences.

One of the major causes for malnutrition is gender inequality. Due to the low social status of women, their diet often lacks in both quality and quantity. Women who suffer malnutrition are less likely to have healthy babies. It was noticed that mothers generally lack proper knowledge in feeding children. Consequently, new born infants are unable to get adequate amount of nutrition from their mothers. Detailed analyses of the reasons of child malnutrition are included in the next chapter.
Factors responsible for Malnutrition

Socio-cultural and Economic reasons

Social status:
In the study undertaken commissioned by CRY in 2013 (through Shivi Development Society, Delhi) it was found that the ones belonging to scheduled castes did have comparatively high number of malnourished children.

The economic status is also linked to barriers in availing ration cards made due to a number of reasons like non availability of proof of residence, lengthy procedure and prevailing corruption. They can’t derive the benefit from schemes like Annashree or get subsidized products from PDS. Their number is exclusively high so is the malnutrition among their children.

Cultural practices:
There are many myths attached with the first feed to be given to the new born child. It is popularly believed, especially among the elderly to give eatables like honey, janamghutti, sugar water, jiggery etc, just after the child is born. But the reality is that it’s a harmful practice. It delays initiation of breast feeding. These food stuffs may not be hygienic, leading to infection to the baby.

During the study, it was found that around (10%) were given honey, and consequently few more were given substances like honey and hot water, janamghutti, sugar syrup etc. It is also believed that a baby should be supplemented with gripe water and janamghutti as it is supposed to be good for ‘hajma’ (digestion) and the liver of the baby. They are also believed to help during teething. But according to the doctors these substances should not be used because firstly, the contents are not standardized. Secondly, most of them contain sedatives like alcohol, morphine etc which may be harmful. They can cause infections and loose motions too.

At the same time age of marriage is also an area of concern. In the same study it was found that in case of 74% malnourished children, the mothers were married off between the ages 11-20 years.

Exclusive Breastfeeding

Exclusive breastfeeding is defined as feeding the child breast milk with no supplementation of any type of food (not even water). National guidelines recommend that all children be breastfed exclusively for the first six months of life. Exclusive breastfeeding for six months reduces gastrointestinal infection and ensures proper growth.

Breastfeeding offers many benefits to the baby. Breast milk contains the right balance of nutrients to help the infant grow into a strong and healthy toddler. Some of the nutrients in breast milk also help protect the infant against some common childhood illnesses and infections. It may also help the health of the mother. Certain types of cancer may occur less often in mothers who have breastfed their babies.

Breast milk is the first natural food for child. It provides all the energy and nutrients that the child needs for the first six months of life, and continues to provide up to half or more of a child’s nutritional needs during the second half of the first year and up to one-third of the second year.
Based on partner-level experience, it was found that most of the children are being deprived of exclusive breastfeeding due to livelihood insecurities at household level. In urban slums mostly infants are being left with siblings while parents are working elsewhere to eke out a living.

### Adequate Housing

Absence of adequate housing plays a significant role in malnutrition among children. The worst affected are the slum-dwellers. Such people have minimal access to the services and programmes available for the low income group people. They have to face tough weather conditions and fight the battle of survival on a daily basis facing typical challenges related to safe storage, clean drinking water, and hygienic conditions. Thus we see the significant prevalence of undernourishment in population deprived of adequate housing.

### Income

Poverty and malnutrition are significantly related. In the same study as above high percentile of undernourished cases could be seen in the income slot of 1000-5000, and they keep reducing as the income is increasing. Table below indicates clearly:

<table>
<thead>
<tr>
<th>Total Income</th>
<th>Underweight</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000-5,000</td>
<td>10</td>
<td>7.1%</td>
</tr>
<tr>
<td>5,000-10,000</td>
<td>9</td>
<td>3.9%</td>
</tr>
<tr>
<td>10,000-20,000</td>
<td>2</td>
<td>2.7%</td>
</tr>
<tr>
<td>Above 20,000</td>
<td>1</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Not only low income, significant relation was also observed between the occupation and its existence all through the year. The main earning member on whose income the family depended, if remained unemployed, the whole family’s nutritional status gets affected.

<table>
<thead>
<tr>
<th>Sources of occupation (Father- Primary)</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily wage labor Agriculture</td>
<td>0.0%</td>
</tr>
<tr>
<td>Daily wage labor Non-agricultural</td>
<td>5.2%</td>
</tr>
<tr>
<td>Farming on own land</td>
<td>0.0%</td>
</tr>
<tr>
<td>Factory worker</td>
<td>4.5%</td>
</tr>
<tr>
<td>Self employed</td>
<td>1.9%</td>
</tr>
<tr>
<td>Service</td>
<td>3.6%</td>
</tr>
<tr>
<td>Currently unemployed</td>
<td>19.2%</td>
</tr>
</tbody>
</table>

It was also seen that unemployment has a direct correlation with malnutrition. Not finding year long employment has significant impact on the children being malnourished in the family.
In the same study, consumption pattern of the household also reflected their meager earnings where apart from grains, milk and pulses, fruits, poultry etc were consumed occasionally by the family and in the family share of the mother is doubtful as she is the one to have meals in the end. In India with an inherently patriarchal construction the males are given precedence when it comes to food. The father and the sons will be fed first leaving what food is left over for the women. The role of the women is to cook and serve their husbands and male child is put in a higher position than the female child. In times of difficulty the women bears the brunt of the tough times often suffering from malnutrition. And babies are generally getting their prime feed through the mother only; hence the same is passed on to them.

**Status of service delivery**

**1. Status of ICDS in Delhi**

Despite of 36 yrs of existence, *ICDS is catering to just approximately 30% of the total 0-6 yrs of population of children in Delhi*. Out of the six major functions attributed to AWC, we strongly feel that except for Nutrition/Supplementary Nutrition and Immunization (both of which are reinforced because of Community awareness and demand) rest four (Health Check-Up, Referral Services, Pre-School Non-Formal Education and Nutrition and Health Education) needs to be overhauled for maximum and effective utilization of resources.

**a. Distribution of ICDS Projects in Delhi**

There are 95 operational ICDS Project in Delhi as provided in table below. North-West Delhi has the highest number of ICDS Project with total number of 27 followed by West and South Delhi.

<table>
<thead>
<tr>
<th>District</th>
<th>No of Operational AWC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>490</td>
</tr>
<tr>
<td>East</td>
<td>607</td>
</tr>
<tr>
<td>North</td>
<td>546</td>
</tr>
<tr>
<td>North-East</td>
<td>1819</td>
</tr>
<tr>
<td>North-West (I &amp; II)</td>
<td>3050</td>
</tr>
<tr>
<td>South</td>
<td>2044</td>
</tr>
<tr>
<td>South-West</td>
<td>579</td>
</tr>
<tr>
<td>West</td>
<td>1738</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10874 out of 11150 sanctioned</strong></td>
</tr>
</tbody>
</table>

As per NCPCR’s ICDS visit report dated April 2011:

Infrastructure: Most of the AWCs were having poor infrastructural facilities. Common infrastructural issues were:
- Shortage of Space
- Difficult approachability
- Ill ventilated – suffocating rooms
- Cramped unhygienic places
- Adjustment of the kids in the room already full of living furniture
- No play area
- Few AWCs are being run from the first floor having steep high-rise steps with no protective railings making the children vulnerable to accidents
- At one place the AWC was running at the Junk store area
- All the AWCs visited were not having enough space to accommodate the kids enrolled. However, they are running because of the fact that more than 50% of the enrolled kids come to the AWCs just to collect food
- Non-availability of functional electric fans in the scorching summer months
b. Distribution of Operational AWCs in Delhi

We can see in the given table highest number of Aanganwadi centres run in North-West Delhi followed by 2044 in South Delhi.

Physical Progress of ICDS- Ministry of Women and Child Development

The Ministry of Women and Child Development released the national status of ICDS through a Physical Progress of ICDS. The report was prepared on the basis of last and latest monthly progress report. An analysis of the Physical Progress report was done by CRY Partner Matri Sudha and the key findings were as follows:

- 38.38 percent children were malnourished
  It is really surprising that there are around 2.5 lakh children falling under mild and moderate categories of Malnutrition. Since there is no provision of budget to provide extra supplementary nutrition to these children, hence, they are being overlooked. Food and Nutrition Board, Govt. of India way back in 2001 issued guidelines for management of Grade I and II Malnutrition in Children. The guidelines says that "Grade I and Grade II malnourished children if not given due attention are likely to develop severe malnutrition, that is, Grade III and Grade IV and may succumb to infectious diseases like measles, pneumonia, and other respiratory and gastro-intestinal infections which may even lead to death". Therefore, the guidelines suggested that growth monitoring of children should be done on regular basis and inform the parents about the nutritional status of their child for early action.

- 293 AWCs yet to be operational in Delhi
  Though every child under six year of age should be covered within ICDS services, however, only 911783 children were found as registered beneficiaries of ICDS services. As per Census 2011, there are more than 19 lakh children aged below six years in Delhi. Remaining 10 lakh children are out of the purview of ICDS services. Irrespective of this fact the number of AWCs sanctioned by the Ministry of Women and Child Development yet to be made operational in June 2013.

- Out of 99 Sanctioned posts of CDPOs only 40 were in position and 92 Supervisors posts were found vacant
  As per the Monitoring and Evaluation Guidelines of Ministry of Women and Child Development a Supervisor has to visit at least 50 percent of AWCs under her jurisdiction every month and a CDPO/ACDPO has to visit at least 20 AWCs per month on a rotational basis and to ensure coverage of 100% AWCs in a year. However, when such a large number of posts are vacant at multiple levels, concerns are there in relation to monitoring and supervision of services provided through AWCs.

c. Growth Monitoring: Growth Monitoring is the only tool to track the nutritional status of children who are the beneficiaries of ICDS services and thus also provide state wise status of malnourished children as to their nutritional status. However, NCPCR’s Delhi Visit Report raises concerns for Growth Monitoring Process across AWCs in Delhi. The report says that though most

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5 APPI:2013-14, Page 13
6 Ministry of Women and Child Development, Government of India: Nationwide Status of ICDS as on 30.06.2013
7 Guidelines for Monitoring and Supervision Visits to ICDS Blocks and AWCs by Officials of State and Central Government, dated: 22 October 2010 (F.No. 16-3/2004-MEPt)
important but one of the weakest part of the AWCs is the Growth monitoring. The main reasons cited in the report were:

- Non-availability of weighing machines
- Sharing of the weighing machines between 3-4 AWCs
- Faulty machines
- Non-availability of new Growth Chart Booklets
- Apathetic attitude of the AWW

According to an analysis of Annual Programme Implementation Plan 2013-14, it was found that, adult weighing scales to be procured in financial year 2013-14 were 1226 (9924 adult weighing scales were available in working condition) and Salter and Baby weighing scales to be procured in the same financial year were 9378 (1772 were available in working conditions). However, in the Summary of Demand for the Year 2013-14, the Govt. of NCT of Delhi asked for only 1226 Adult weighing scales @ Rs. 1000 per machine, with no reference to Baby and Salter weighing scales.

2. Nutrition Rehabilitation Centre (NRC) in Delhi

The Nutrition Rehabilitation Centre (NRC) - Residential care have been set up to provide immediate care & treatment to severe malnourished children. At present, 11 Nutritional Rehabilitation centers have been operational in Delhi (02 centers in North West, 02 in North Delhi, 01 in Central Delhi, 01 in New Delhi, 03 in North East Delhi and 02 in West Delhi). However, functioning of these NRCs are very dismal as severely malnourished children (SAM) are hardly availing referral services for their immediate care and treatment. It was observed that, most of the Anganwadi workers are unaware about availability of such centers and its services. Level of community awareness to seek referral service through NRC is almost non-existence.

3. Health Services

Under ICDS Mission, health services is now a combination of immunization and micronutrient supplementation, health check-up and referral services to children under six years and pregnant and lactating mothers. Health services at anganwadi centres are provided in convergence between two departments- Directorate of Health and Family Welfare and Department of Women and Child Development within the framework of NRHM with ASHAs as frontline workers.

The government of India in 2005 launched National Rural Health Mission (NRHM) to provide accessible, affordable and quality health care to the rural population, especially the vulnerable section, however, the framework of NRHM later extended to urban areas. The Ministry of Health and Family Welfare which is the nodal Ministry to implement NRHM updated the status of its implementation as on 30th June 2013. This recent status also provides the following information in respect to Delhi:

- Total Number of ASHAs in Delhi were- 4692
  Since there has to be one ASHA worker for every 1000 population in urban areas there is a dearth of ASHA workers to reinforce health and nutrition activities at community level using Aanganwadi centres as the prime post.

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8 Delhi Visit Report, National Commission for Protection of Child Rights, April 2011, page 8
9 Analysis of Annual Programme Implementation Plan received through RTI on 20.02.2014 by Matri Sudha
• Number of Village Health and Nutrition Days organized in Delhi in last five years starting from 2009 to 2013 were 10887. Village Health and Nutrition Day (VHND) is to be held every month on fixed days (under the NRHM) provides an opportunity for convergence of services of the ASHA/ANM and AWW. On an average around two thousand VHNDs were organized per year in last five years. In March 2010 there were 6,606 AWCs in Delhi which increased to 10,874 at the end of March 2013.

This means that 1 VHND was organized for every third AWC in Delhi till the year 2011 and subsequently 1 VHND for every fifth AWC after 2011.

• Number of Village Health Sanitation and Nutrition Committees (VHSNC) constituted in Delhi were 324. Village level Health and Sanitation Committee will be responsible for the Village Health Plans. ASHA, the Aanganwadi Worker or Sevika, the Panchayat or urban local body representative, the SHG leader, the PTA/MTA Secretary and local CBO representative will be key persons responsible for the household survey, the Village/Slum Health Register and the Village/Slum Health Plan. There is no district or ICDS project based information available to track the work done by through VHSNC.

• On Child Health parameters the status of Delhi is lowest among UTs:
  - Percentage of Children under 3 years breastfed within one hour of birth - 30
  - Percentage of Children age 0-5 months exclusively breastfed - 12.8
  - Percentage of Children age 6-35 months exclusively breastfed for at least 6 months - 8.9

4. Water and Sanitation

In the study commissioned by CRY on ‘Malnutrition Study in NCT of Delhi’ (2013) it came out that the nutritional status is compromised where people are exposed to high levels of infection due to unsafe and insufficient water supply and inadequate sanitation. The main source of water that the families consumed for drinking, cooking and cleaning, in the areas covered were the MCD water supply. The water from the MCD taps was used directly without treating it.

Water supply, sanitation and hygiene, given their direct impact on infectious disease, especially diarrhea, are important for preventing malnutrition. Both malnutrition and inadequate water supply and sanitation are linked to poverty. The impact of repeated or persistent diarrhea on nutrition-related poverty and the effect of malnutrition on susceptibility to infectious diarrhea are reinforcing elements of the same vicious circle, especially amongst children. There is also prevalence of intestinal worms that trap the child in the vicious circle of malnourishment.

More than half of the slum children in Delhi defecate in the open.

The Baseline Survey finds that 52 per cent of the children living in slums and unauthorized colonies defecate in the open.

Source: Baseline Survey on Water, Sanitation and Hygiene conducted by Mission Convergence across 19,683 households in Delhi, 2012

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10 Annual Programme Implementation Plan (APIP: 2013-14), Govt. of NCT of Delhi
11 As on 31st March 2011, total number of AWCs in Delhi were 6606- Annual Programme Implementation Plan (APIP: 2013-14), Govt. of NCT of Delhi
The percentile malnourished children of people residing in *Kuchha* houses are more than that of the pucca house. Similarly those having toilets in their home have less percentage of underweight children. The ones using open places to defecate have the highest percentage of underweight children. Many illnesses, especially diarrhea, are caused by germs found in human faces. If germs get into water or on food, hands, utensils or surfaces used for preparing and serving food, they can be swallowed and can cause illness. Hence there are more cases of diarrhea in rainy season, especially in the areas where people defecate in open.
Malnutrition and Diseases

The extreme and harsh living conditions in urban slums makes children highly vulnerable in terms of social-economic and physical security. The slums in Delhi are characterized by their appalling conditions with lack of basic hygiene and sanitation facilities, toilet facilities and access to safe drinking water. The increasing vulnerabilities of slum dwellers have adverse impact on overall health and hygiene of children. Based on field observations, inadequate safe drinking water facilities, drainage and lack of toilet facilities have been breeding grounds for water borne diseases, increase

People are malnourished if they are unable to utilize fully the food they eat, for example due to diarrhoea or other illnesses (secondary malnutrition), or if their diet does not provide adequate calories and protein for growth and maintenance (under-nutrition or protein-energy malnutrition). Malnutrition in all its forms increases the risk of disease and early death. Protein-energy malnutrition, for example, plays a major role in half of all under-five deaths each year in developing countries (WHO 2000). Severe forms of malnutrition include marasmus (chronic wasting of fat, muscle and other tissues); cretinism and irreversible brain damage due to iodine deficiency; and blindness and increased risk of infection and death from vitamin A deficiency.

Nutritional status is compromised where children are exposed to high levels of infection due to unsafe and insufficient water supply and inadequate sanitation. In secondary malnutrition, children suffering from diarrhea will not benefit fully from food because frequent stool passing prevents adequate absorption of nutrients. Moreover, those who are already experiencing protein-energy malnutrition are more susceptible to, and less able to recover from, infectious diseases. Individual nutritional status depends on the interaction between food that is eaten, the overall state of health and the physical environment. Malnutrition is both a medical and a social disorder, often rooted in poverty. Combined with poverty, malnutrition contributes to a downward spiral that is fuelled by an increased burden of disease, stunted development and even child mortality.

The other important thing that is observed is the reduced intake of food during illness to which not much attention was paid by the mothers, thinking that the illness decreases the appetite, so much so that they showed complete ignorance on the food intake of the child. For an adult it could be easy to go without proper food for a couple of days but for an already undernourished child it could be fatal.

Ignorance of the mothers also significantly affected the child’s health in general and nutritional status in particular. Children are more likely than adults to die from diarrhea because they become dehydrated more quickly. Diarrhea is also a major cause of child malnutrition. Many illnesses, especially diarrhea, are caused by germs found in human faeces. If germs get into water or on food, hands, utensils or surfaces used for preparing and serving food, they can be swallowed and can cause illness. Slum children are more vulnerable to water borne diseases including diarrhea due to lack of safe drinking water facilities, hygiene and Sanitation in their habitation.
This Reality check report outlined that extent of child malnutrition among children under the age of five years and the linkages between deprivation and denial of basic human rights, socio-economic inequalities and under-nutrition. The poor, vulnerable & marginalized communities in Delhi, especially in slum areas, shouldered the disproportionate burden of malnourished children is one of the major findings in the report. Keeping in view of such a weak child nutritional status, policy prioritization should aim at addressing the most important determinant of malnutrition and reaching to the most vulnerable & marginalized communities. Even, specific target should be set for areas where the prevalence of malnutrition is highest.

Moreover, leadership and strong political commitment are necessary to address some of the structural gaps & inefficiency of various schemes and programmes targeted to address appalling nutritional status among children. Child malnutrition. Need of the hour is to strengthen information system with utmost transparency and fixing accountability at various levels to optimize better results of designed policies and programmes for these marginalized communities with focus on children. Bridging the gap between different policy intentions and realization of the same at ground level with effective implementation will augment the hope of reducing malnutrition among children.
Key recommendations

- Strong political will to prevent malnutrition to address both the underlying causes and consequences. While the State budget has increased by 12.01%, the share of budget for children (BfC) has increased by only 0.07% over 2012-2013. There is a decline in the share in Child health in the State budget as well as within BfC in 2013-2014 as against 2012-2013. Allocation of budget for children should be made adequate and equitable.

- Making ICDS centres functional as per the norms of ICDS Mission: Infrastructure development, allocation of adequate budget and its proper utilization, capacity building, monitoring & evaluation.

- Sensitization of Community on preventive and curative aspects of malnutrition, including behavioral and practice aspects focusing on social and cultural practices done after the birth of the child.

- Ensure proper growth monitoring; its recording and registration to be made accurate and transparent. Ensure linkage to referral services.

- Data regarding nutritional status of children to be made available in public domain.

- Activate sanctioned NRCs with adequate infrastructure, staff, and budgetary allocation. Facilitate opening of NRCs where required. Proper dissemination of information among stakeholders and community.

- Policy prioritization towards reducing malnutrition in children among most marginalized communities e.g. migrants and NT/DNT through specific programmes for children of these communities.

- There is a large population of working parents in the slums of Delhi. More often young children are left behind and are not properly looked after, making the child more prone to malnutrition. This calls for effective implementation of the ECCE policy, including opening of crèches and day-care centers.

- Effective coordination between various departments & bodies – WCD, Health Department, Municipal authorities, district administration etc and convergence of schemes and programmes for better results.
Glossary

1. **APL** - Above Poverty Line
2. **AWC** - Anganwadi Center
3. **AWW** - Anganwadi Worker
4. **AWH** - Anganwadi Helper
5. **ANM** - Auxiliary Nurse Mid-wife
6. **BPL** - Below Poverty Line
7. **BSAH** - Baba Sahib Ambedkar Hospital
8. **CBGA** - Center for Budget and Governance Accountability
9. **DTC** - Delhi Transport Corporation
10. **ECE** - Early Childhood Education
11. **ICDS** - Integrated Child Development Scheme
12. **IAP** - Indian Academy of Pediatrics
13. **IGMSY** - Indira Gandhi MatriSahyogYojna
14. **JJ Colony** - JhuggieJhompri Colony
15. **JNURM** - Jawaharlal Nehru Urban Renewal Mission
16. **MCD** - Municipal Corporation of Delhi
17. **MDMS** - Mid-day Meal Scheme
18. **NCPCR** - National Commission for Protection of Child Rights
19. **NDPL** - North Delhi Power Limited
20. **NGO** - Non-governmental Organization
21. **OBC** - Other Backward Classes
22. **PEM** - Protein Energy Malnutrition
23. **PHC** - Public Health Center
24. **PSE** - Pre-school Education
25. **RLNL** - Relatively Low Nutritional Level
26. **SC** - Schedule Caste
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