Chapter - I

FRAME OF REFERENCE
Through the creation of culture and society and the concomitant development of technology man has evolved from a pure biological species to flexible and changing social organism. Man through his learning ability and power of thinking can acts consciously to set up rules and laws of behaviour with which to protect the social organism. Even if need arises, against the biological imperatives of the individual components of society the ability to learn enables him to determine what he does to himself and to his environment. Comprising all sorts of transactions actual or potential that occur because of the fortes’ association of man with his fellow men that within this social context man is concerned about the fate of his species.

The second half of the 20th century is witness of an increasing interest in the ways through which environment affects man. Health has become a major focus of interest for an increasing number of persons and in situation dealing with social, political and economic policies. This in turn has led to the consideration of nutrition as important factor in the life of the individual from the time of conception to the end of his life, and more particularly during the period of growth and maturation.
Nutrition can't be considered in isolation. Nutrition is the final outcome of many interacting factors operating simultaneously and concurrently on the individual in the physical, ecological and cultural setting of the community. Food habits and practices of human beings are social products rather than biological. The amount of food and nutrients consumed by the individuals directly influence the nutritional status, these further depend on food production, availability, logistics of distribution of economic system etc. Nutritional status at the population level reflects cumulative effect on wide range of development. Improved nutrition is basic to improved work efficiency and output as well as longevity and survival.

Nutrition is of great importance in infancy, pregnant and lactating women. Somatic growth is rapid and will falter in nutritional deficiency. If malnutrition is prolonged, both somatic growth and brain development can be permanently impaired. Malnutrition in infancy is relatively common because of the high nutritional requirements of growth and development. In addition infants are entirely dependent on others for their nutrition, but their carers may have difficulty in recognising their needs.

Adequate nutrition for all is among the most obvious priorities of development. Malnutrition impairs development and malnourished children are at a greater risk of survival than healthier one.

Children together with women in child bearing age constitute a large and important segment of India's population. Despite the spectacular progress achieved since independence the quality of life of most of these children unfortunately remained below the standards envisaged by the national policy makers.
Nutrition situation: Inadequate diets, either single or in association with infection account for a large share of the burden of under nutrition in India, much of this is due to poverty related under consumption of energy and protein. Equally important as the deficiencies of micronutrients like vitamin-A, Iron and Iodine from which the most vulnerable segments of population like young children and women suffer disproportionately.

This is reflected in the key health and development indicators like high infant mortality rate, high levels of morbidity, higher incidence of malnutrition and nutrition related diseases. Nearly 60% of the infant deaths occur within the first one month after birth and a majority of them could be attributed to low birth weight resulting from wide spread undernutrition among the pregnant women (Vijaya Raghavan & Kamala Krishna Swamy 1998).

Protein-energy malnutrition (PEM): The severe forms of clinical PEM like Kwashiorkor and Marasmus are commonly prevalent in the children under the age of five years. Its prevalence ranges from 1-2% in the rural, tribal and slum areas. Protein-energy malnutrition raises the risk of death and may also reduce physical and mental capacity. In addition, there is widespread prevalence of sub-clinical PEM, which can be diagnosed by nutritional anthropometry using measurements like body weight and height. While body weight indicates the effects of both short term and long term malnutrition on growth of children, height is basically an index of chronic malnutrition (stunting). The prevalence of stunting is about 65% in the country. The recent country wide national family and health survey (1992) indicate that about 53% of the Indian children are under weight. The surveys carried out by the National Nutrition Monitoring Bureau (1999) indicate that between 1975-79 and 1988-90 the percent of
severely malnourished declined from about 15% to 8.7% there is large variation in the extent of under-nutrition between the various states

1.1.2. Vitamin-A deficiency (VAD)

Vitamin-A deficiency is the most important cause of nutritional blindness in young children. It is estimated that about 30,000 to 40,000 children become blind every year in India due to VAD. The prevalence of mild forms like Bitot spots and night blindness ranges from 1-3% in different parts of the country. Even the milder forms of VAD are also reported to increase the risk of morbidity and mortality in pre-school children.

Iron Deficiency Anaemia (IDA): Iron deficiency anaemia is reported to be occurring in about 70% to 90% of Indian pregnant women belonging to low socio-economic groups of population. The magnitude of nutritional anaemia is up to 50% in pre-school children. In women, it increases the risk of death from haemorrhage during child birth. It reduces physical productivity and children capacity to learn at school. Anaemia also increases the susceptibility of individuals to infections.

Iodine deficiency disorders (IDD): Iodine deficiency disorders, till recently seen mostly in the sub-Himalayan region of the country, and also from south of Vindhyas. It causes mental retardation, delayed motor development and stunting as well as deaf-mutism and neuromuscular disorders. The most important complications of IDD are mental and physical retardation since birth. In India the prevalence of cretinism is widely prevalent in the North east of the country like Manipur. About 200 million children are effected with cretinism and 6.6 millions suffer from mild motor handicaps.
About 90,000 still births and neonatal deaths occur due to IDD in the country. (Vijayaraghavan & Kamalakrishnaswamy 1998)

**Health indicators:** Higher childhood mortality and morbidity could constitute a substantial drain on human resources of the country and may neutralise the benefits of economic progress. There is an increasing need to correct distortions by providing health care, education, sanitation and an infrastructure where every child finds an opportunity and encouragement to develop into a healthy and productive human being.

Since independence there has been a substantial decline in infant mortality rate from more than 160 per 1000 live births at the time of independence, to about 72 per 1000 live births at present. The underfive mortality rate (109/1000 live births) and maternal mortality rate (570/100,000 live births) remain still very high.

The average birth weight of Indian infants is around 2.8 kg, mainly due to high prevalence of maternal malnutrition. The extent of low birth weight (less than 2500gms) is about 30% as compared to about 8-10% in infants born to well to do Indian mothers. The prevalence of child morbidity, having direct relevance to under-nutrition like diarrhoea, acute respiratory infections, parasitic infection is very high.

**EFFORTS OF INTERVENTIONS**

There is general awareness at all levels that malnutrition is widespread among pre-schoolers, pregnant women and lactating mothers. The causes underlying the malnutrition have not changed very much over the past 50 years. Poverty, ignorance and disease remains same with inadequate food supplies, unhealthy environments, social stress and discrimination still persist unchanged as a web of interacting factors.
which combined to create conditions in which malnutrition flourishes. However, what does change greatly is the approach to tackling malnutrition. The international conference on nutrition (ACC / SCN Report 1997) developed nine common areas for action to promote and protect the nutritional welfare of the population.

- Improving household food security
- Protecting consumers through improved food quality and safety.
- Preventing specific micro nutrient deficiencies.
- Promoting breastfeeding.
- Promoting appropriate diet and healthy lifestyles.
- Preventing and managing infectious diseases.
- Caring for the economically deprived and nutritionally vulnerable.
- Assessing, analysing and monitoring the nutrition situation.
- Incorporating nutrition objectives into development policies and programs.

Energy is the major bottle neck in the diets of Indian children, diets of pre school children in our country on an average shows a deficit about 300 calories. The factors underlying inadequate diet of pre school children, pregnant and lactating mothers are poverty, unemployment, low purchasing power and household food insecurity. Nation wide nutritional surveys shows that as many as half of the 126 million pre school children of India are mal nourished and tend to suffer from the resultant physical wasting and stunting. At least 40% of pre scholars and 12-14 million women requires supplementary feeding for combating malnutrition among infants and children (Pralhad Rao 1990).
Since independence the Govt. of India and State Govt's. have launched a number of health and nutritional programs along with other developmental programs to combat malnutrition in the country. A brief account of the national health and nutrition programs is given below.

**Supplementary Nutrition Programme (SNP):** The supplementary nutrition programme launched during the year 1970-71 is targeted towards pre-school children, pregnant and lactating women belonging to vulnerable strata of the society living in urban slums, tribal and drought prone rural areas. The supplementary food being provided under this programme provides about 300 calories with 10-15 gr\(^n\) Protein to children and 500 calories and 25 gr Protein to women in the form of either locally prepared or centrally processed ready to eat food. The beneficiaries of the programme can receive food supplementation for about 250 to 300 days in a year.

The department of social welfare in most of the states operated this programme with a local community or an agency through a feeding center, which are managed by a part-time organised and helper. The nearest health agency is expected to provide the health care services to the beneficiaries.

The shortcomings of the programme identified by National Institute of Nutrition (NIN), Hyderabad in their evaluation study were irregular supply of food commodities to the feeding centers, non-revision of list of beneficiaries at periodic intervals, sharing of supplements by non-beneficiaries, lack of health inputs, poor participation of younger children, unaware of the programme and poor community participation.

**Balwadi Nutrition Programme:** The Balwadi nutrition programme is aimed at bridging the food gap of children in the age group of 3 to 5 years attending Balwadis or creches. The feeding is organised by Balasevika, incharge of the Balwadi, along
with a helper. The nodal department in implementation of the programme is department of social welfare.

**Mid-day-meal (MDM) programme:** This programme was launched during the year 1962-63 by the department of education with the objective to increase regularity of school attendance by providing a supplementation meal in the school. The supplements under this programme either locally cooked or centrally processed to providing about 600 calories and 15-20 gr Protein.

**Prophylaxis against blindness in children due to vitamin-A deficiency:**

Micro nutrient deficiency disorders are another major public health problem in India. About 30 thousand children were estimated to become blind every year due to keratomalesia as a result of deficiency of vitamin-A. A simple solution to this has been evolved by the National institute of nutrition (Hyderabad), which is being implemented all over the country. A six months massive dose of vitamin-A in oil (200000 IU) is given orally to all children between 9 months to 5 years of age.

This programme is implemented by the department of health & family welfare since 1976. Evaluation studies carried out by NIN, Hyderabad have shown that the regular distribution of vitamin-A is effective in preventing blindness and milder forms of vitamin-A deficiency like bitot's spots and conjunctival xerosis.

**Prophylaxis against nutritional anaemia:**

Anaemia is major underlying factor in the high morbidity and mortality among women of reproductive age group and pre school children. This is mainly due to dietary deficiency of iron and folic acid. A national programme to prevent anaemia was conceived by NIN and being implemented by the department of health and family welfare.
Folifer tablets containing 60 mg. of elemental iron and 0.5 mg. Folic acid for women and 20 mg. Of iron and 0.1 mg of folic acid for children are given for a continues period of about 100 days in a year.

A major problem in the implementation of the programme appears to be ensuring of daily consumption of the tablets by beneficiaries. To over come this problem NIN has evolved an effective methodology for fortification of the common salt with iron.

**National Goiter control programme:** About 40 million people in our country are estimated to suffer from goitre and many more are at risk of developing iodine deficiency disorders. The casual factor is deficient intake of iodine in diet. This can be over come by providing common salt fortified with potassium iodate.

The government of India initiated the National goitre control programme by the end of second five-year plan with the following main components.

♦ Survey of goitre in suspected areas to identify and assess its prevalence.
♦ Production and supply of iodised salt to endemic areas to prevent and control goitre.

Apart from inadequate production of iodised salt, which was not enough for even 50% of the requirements, the programme has suffered from lack of coordination between various agencies involved. Besides these other National Health Programmes also have been launch which have bearing on nutrition health of the mother and child; a few of these are given below.
Other National health programmes:

- Universal immunization programme - 1978.
- Diarrhoeal diseases control programme.
- Dias training programme.
- National family welfare programme.
- Multipurpose health workers scheme.
- Japanese encephalitis control programme.
- Child survival and safe motherhood programme.
- National water supply and sanitation programme - 1954

Vulnerable segments of population

The most vulnerable sections of population, as for as under-nutrition is concerned are

1. Infants
2. Pre-schoolers
3. Pregnant, lactating women and adolescent girls.

In addition populations living in the backward and drought-prone rural areas and urban slums, and socially backward groups are highly susceptible to under-nutrition.

While planning any intervention programmes consideration is given to these segments of population. Population below poverty line are also more susceptible to nutrient deficiencies.

Till 1975, most of the attempts to overcome these problems were isolated and failed to have the desired impact. In 1972, a working group comprising of 8 ministerial teams organised by the Ministry of Planning recommended the need to develop
integrated services for children with cognitive, nutrition and health inputs. Keeping these broader perspectives in view, the integrated child development services (ICDS) scheme was launched in 1975.

**Integrated child development services scheme (ICDS):**

ICDS is the single largest nutrition intervention programme, which is a comprehensive approach started on October 2nd 1975. The programme started in 33 most backward community blocks and extended to more than 5000 blocks throughout the country and moving ahead to cover entire population of the country. It provides a package of following services to pre-school children and women in 15-45 years of age group including other than pregnant and lactating women.

1. Supplementary feeding
2. Immunization
3. Health checkups
4. Growth monitoring
5. Referral services
6. Treatment of Minor ailments
7. Nutrition and health education
8. Non formal pre school education

These services are provided through anganwadi centre located in vulnerable area constitute a coverage population of 1000 in rural and urban areas and 700 in the hilly or tribal areas.
Studies carried out by its internal monitoring group have shown its beneficial efforts, through some independent studies have highlighted lack of co-ordination between concerned departments.

Review of literature:

ICDS has been subjected to research and evaluation since its inception and is also being monitored to some extent. Many technical institutions, medical colleges, school of social work, home science colleges and sociologist are involved.

The integrated child development services (ICDS) scheme, initiated in 1975 as an innovative experiment in 33 projects has developed into the most comprehensive programme in delivery of an integrated package of services encompassing the main components of human resource development namely health, nutrition and education. The scheme has expanded considerably. In terms of its outreach it is one of the largest of such programmes in the world.

Since its inception, the programme has generated considerable interest among planners, administrators, researchers and field level functionaries. A large number of research studies have been undertaken to assess the impact of the programme on the target groups. A review of these research studies indicates that ICDS has had a positive impact on beneficiaries and has the potential of enhancing the child survival rate. Definite improvement has been reported on major indicators of health and nutrition like IMR, nutritional status, morbidity pattern, immunization coverage and utilization of health services. In primary school, children from ICDS areas were having better competencies on language, cognitive, conceptual development and behaviour parameters as compared to their counterparts in NON-ICDS areas. Improvement in
enrolment and scholastic performance further indicated a positive impact of pre-school education component of ICDS.

A study conducted by NIPCCD (New Delhi 1985) stated that the utilisation of health care facilities by expectant mothers in ICDS areas was greater than in NON-ICDS areas. The percent of mothers in ICDS area utilised health services like Health checkup (50%), Immunization (46%), Health and Nutrition education (33%) and supplementary nutrition (47%), in NON-ICDS areas the utilisation was only around 30%, in the same study it was observed that there was short fall of about 20-25 percent in coverage of nursing mothers under various services of ICDS.

Some of the health aspects of the programme have recently been investigated by Nutrition foundation of India. The study acclaimed its contribution towards preventive and promotive aspects and recommended expansion of ICDS as powerful ally to the existing health system.

A few researchers have reported the impact of better utilisation of supplementary nutrition on the nutritional status of beneficiaries. It was found that the nutritional status of children in an urban ICDS block was better than those in rural ICDS block due to better utilisation of the services (Bawaskar 1985). In another urban ICDS block, the percentage of grade IV malnourished children reduced from 2.2 to 1.1 after ICDS project was started (Gupt J.P, 1978). On the other hand it was reported that supplementary nutrition through provided in most of the blocks was not accepted fully. About 32% of AWWs were of the view that mothers did not like the food offered under the supplementary nutrition. Venugopal (1985) observed that upma, or snack offered is an anganwadi was not accepted by 7.5% beneficiaries where as ready to eat food was accepted by 80% children, expectant and nursing mothers.
ICDS functionaries are specially trained to identify malnourished children before giving supplementary nutrition. In a study it was reported that 77.3% children were receiving supplementary nutrition though there was only 30.5 mal nourished children entitled for the same (Gupta 1978).

AWWs found it difficult to get the health check up of the children done because they had to carry the children to PHC at their risk. Medical officers / LHV did not visit the anganwadis regularly. Children received medical care from private practitioners for disease like respiratory infection, skin and eye infection, diarrhoea and fever. AWWs, PHC and sub-centres to some extent. The utilisation services from private practitioners by the villagers was largely low because the doctors were practising about 3kms away from the villages and only a small percentage of children availed medical aid from PHC/Sub-centres because of the absence of the doctor (Gupta, K.B., 1977).

The utilisation of services by expectant and nursing mothers (Gupta J.P, 1978) reported that 37.3% were receiving supplementary nutrition. In another study it was found that 10.3% expectant mothers and 18.7% of nursing mothers in a rural ICDS block and 28.8% expectant and 49.4% nursing mothers in an urban ICDS block received supplementary nutrition. About 46% expectant mothers in a rural area and 33% in an urban area were immunized (Bawaskar 1985).

Awareness of beneficiaries regarding the services available and their satisfaction has direct bearing on their utilisation. It was found that beneficiaries were not fully aware of the services provided under ICDS. Venugopal (1985) reported that only 25% families were aware of ICDS and anganwadi. Further, through 75% of mothers were well aware of the immunisation programme, only 10% knew about non-
formal pre-school education component. Rainia (1985) found that 98% respondents were not aware of tetanus vaccination. In some ICDS blocks, beneficiaries were satisfied with the services and in others they were not, according to Gupta J.P. (1978) about 97% of beneficiaries were satisfied with the services, 89% found them very useful and 98.7% were utilising the services regularly.

The skilled knowledge and attitude of ICDS functionaries and the time spent by them in delivering the services also influence their utilisation. Gupta J.P. (1978) was reported that AWWs spent nearly 21% of the time on health services and 54.2% on non-health activities including pre-school education. The remaining 24.9% time was not utilised.

The coverage, delivery and utilization of services are important links in the chain of reactions leading to impact. The status report brought out by central technical committee at All India institute of medical sciences, New Delhi, to monitor health and nutrition component of ICDS felt that there is need to conduct national level longitudinal research studies related to utilisation of ICDS services to assess the change in the status of beneficiaries and conclusions can be drawn on the basis of both qualitative and quantitative analysis of the data.

Statement of problem:

ICDS since its inception has generated considerable hope among planners, administrators and policy makers in bringing better mother and child, health & nutrition care and thereby the better health levels for these sections which are otherwise vulnerable. The researchers have been keenly interested in this programme. The brief review made earlier brings out these views clearly. However, the review also points out that they need for continuous evaluation and comparative
Studies not only on the functioning of ICDS and its impact but also stress on the need for comparative studies between the project areas of long term and short term duration of ICDS implementation, and further the extend of utilisation of ICDS service by the beneficiary.

This issue has been clearly brought out by the All India Institute of Medical Sciences, New Delhi. The institute in its status report on ICDS pointed out the need to conduct national level longitudinal research studies related to utilisation of ICDS services to assess the change in the status of beneficiaries.

Keeping in view this reflections in mind in the present study an attempt is made to study the longitudinal utilisation of ICDS services. Since ICDS intervention are generally plan in the backward and poverty stricken areas, the present study is carried out in the context of a chronically drought prone, poverty stricken and backward district, namely Kurnool, Andhra Pradesh.

Method of study

The present study carried out with the following objectives.

OBJECTIVES:
1. To study the socio-economic profile of the households.
2. To study the extant of utilisation of ICDS services by the pregnant and lactating mothers.
3. To study the nutritional status of children below 6 years of age.
4. To study the longitudinal impact on utilisation of health and nutritional service in rural ICDS blocks.

Universe:

The ICDS programme in all the districts of Andhra Pradesh see Table-1. Among of four Rayalaseema districts and other drought prone districts like Mahaboob Nagar, Kurnool district of Rayalaseema which is a chronically, drought prone poverty stricken and backward region, has larger number of ICDS blocks. Hence, Kurnool district is considered as the universe for the present study. 14 ICDS blocks are on operation in the district.
Table - 1

District wise particulars of ICDS by No of projects, sectors and AWC's in Andhra pradesh

<table>
<thead>
<tr>
<th>District</th>
<th>No of projects</th>
<th>Sectors</th>
<th>AWC's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anantapur</td>
<td>17</td>
<td>137</td>
<td>2289</td>
</tr>
<tr>
<td>Adilabad</td>
<td>11</td>
<td>95</td>
<td>1773</td>
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<tr>
<td>Cuddapah</td>
<td>08</td>
<td>51</td>
<td>998</td>
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<tr>
<td>Chittoor</td>
<td>13</td>
<td>87</td>
<td>1744</td>
</tr>
<tr>
<td>East-Godavari</td>
<td>13</td>
<td>72</td>
<td>1426</td>
</tr>
<tr>
<td>Guntur</td>
<td>04</td>
<td>24</td>
<td>496</td>
</tr>
<tr>
<td>Kurnool</td>
<td>14</td>
<td>101</td>
<td>1893</td>
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<tr>
<td>Karimnagar</td>
<td>09</td>
<td>73</td>
<td>1368</td>
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<tr>
<td>Khammam</td>
<td>10</td>
<td>87</td>
<td>1565</td>
</tr>
<tr>
<td>Krishna</td>
<td>06</td>
<td>34</td>
<td>790</td>
</tr>
<tr>
<td>Mahaboobnagar</td>
<td>06</td>
<td>40</td>
<td>913</td>
</tr>
<tr>
<td>Nizamabad</td>
<td>07</td>
<td>45</td>
<td>1016</td>
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<td>Nellore</td>
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<td>Ongole</td>
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<td>Rangareddy</td>
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<td>Nallagonda</td>
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<td>741</td>
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<td>Srikakulam</td>
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<td>58</td>
<td>955</td>
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<td>Vizianagaram</td>
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<td>999</td>
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<td>West-Godavari</td>
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<tr>
<td>Medak</td>
<td>05</td>
<td>37</td>
<td>746</td>
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<tr>
<td>Warangal</td>
<td>09</td>
<td>81</td>
<td>1408</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>04</td>
<td>16</td>
<td>400</td>
</tr>
</tbody>
</table>

(Nutrition surveillance system NIN Hyderabad 1998)
Sampling procedure:

Two ICDS blocks were chosen and named as block I and block II. Block I represents the Dhone ICDS block, which has been in operation for more than 10 years, and block II represents the Banaganapalli ICDS block where the programme has been in operation for the last 6 years. Multistage stratified random sampling procedure was adopted. Out of 14 blocks in the district, 2 blocks were chosen. Blocks are divided into sectors and 38 AWC were selected from 15 sectors in both the blocks.

20 households were covered from each AWC area, of which 6 households have children aged 6-36 months, and the same proportion covered for 36-72 months. 4 households belong to pregnant mothers, and 4 households belong to lactating mothers.
KURNOOL ICDS

11 Sectors
256 AWCs
18 AWCs
From each AWC

4 Sectors
74 AWCs
20 AWCs
From each AWC

6 HH
6-36 m Children
6 HH
36-72 m Children
4 HH
Pregnant Women
4 HH
Lactating Mothers
Unit of study:

About 740 households were covered to obtain the information on utilisation of health and nutritional services. About 7614 households in both the blocks surveyed to obtain village and households profile and nutritional status of children. Household is the basic unit of the study.

Tools of Data Collection:

- Specially designed and pre-tested schedule used for data collection.

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enumeration</td>
</tr>
<tr>
<td>2</td>
<td>Socio-Economic particulars</td>
</tr>
<tr>
<td>3</td>
<td>Index Children</td>
</tr>
<tr>
<td>4</td>
<td>Children 36-72m</td>
</tr>
<tr>
<td>5</td>
<td>Pregnant/Lactating women</td>
</tr>
<tr>
<td>6</td>
<td>Nutritional Status of children</td>
</tr>
<tr>
<td>7</td>
<td>Village profile</td>
</tr>
</tbody>
</table>

Anthropometric measurements (weight for Age) of children was used to assess the nutritional status of children. Tansi Balance (Bar Balance) was used to weigh the children. Secondary information was collected from various evaluation studies by National Institute of Nutrition and other technical research institutes.

Techniques of analysis:

Based on the weight for age, children were graded according to IAP and Gomez classification. I A P is a scale of grading children formulated by Indian academy of paediatrics using Harvard standards. Gomez classification is widely using in Nutrition research institutes, where as IAP classification is observing in ICDS Growth Monitoring.

The data was processed with reference to process variables the analysis of data on pregnant women and lactating mothers the process variables used are
a) Antenatal check-up (pregnant women)
b) Risk assessment (pregnant women)
c) Tetanus Toxic immunisation (pregnant women)
d) Participation in supplementary nutrition programme (pregnant & lactating mothers)
e) Supplementation of iron and folic acid tablets (pregnant & lactating mothers)
f) Referral services (pregnant & lactating mothers)
g) Distribution of disposable delivery kits (pregnant)
h) Post partum supplementation of Vitamin-A (lactating mothers)
i) Health and Nutrition Education (pregnant & lactating mothers)

The process variables used in the analysis of longitudinal impact on children (6-36m, 36-72m & 12-36m, 36-60m) were

a) Immunisation status (12-24m)
b) Vitamin-A Mega dose (9-60m)
c) Supplementation of iron and folic acid tablets (12-60m)
d) De-worming (6-72m)
e) Growth Monitoring (6-72m)
f) Supplementary Feeding (6-72m)
g) Treatment of minor ailments (6-72m)
h) Use of ORS during diarrhoea (6-72m)
i) Treatment of Acute respiratory infection (6-72m)
j) Referral services (6-72m)

k) Initiation of breast feeding (New borne)

l) Feeding colostrum (New borne)

m) Pre-School Education (36-72m)

n) Prevalence of Nutritional Deficiency Signs (6-72m)

The longitudinal impact is measured by comparing two blocks one of which has shorter duration of ICDS implementation (<6Yrs) and the other with longer duration of ICDS implementation (>10 Yrs)

the data is presented in simple the way Table forms and simple statistics like Ratios, percentages were used.

**IAP Classification**

<table>
<thead>
<tr>
<th>Weight for age</th>
<th>Nutritional Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 80</td>
<td>Normal</td>
</tr>
<tr>
<td>70 - 80</td>
<td>Grade-I under nutrition</td>
</tr>
<tr>
<td>60 - 70</td>
<td>Grade-II under nutrition</td>
</tr>
<tr>
<td>50 - 60</td>
<td>Grade-III under nutrition</td>
</tr>
<tr>
<td>&lt; 50</td>
<td>Grade-IV under nutrition</td>
</tr>
</tbody>
</table>
Gomez Classification

<table>
<thead>
<tr>
<th>Weight for age</th>
<th>Nutritional Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 90</td>
<td>Normal</td>
</tr>
<tr>
<td>75 – 90</td>
<td>Grade I (Mild under nutrition)</td>
</tr>
<tr>
<td>60 – 75</td>
<td>Grade II (Moderate under nutrition)</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>Grade III (Severe under nutrition)</td>
</tr>
</tbody>
</table>

Chapterisation

The first chapter: The frame of reference presents an introduction, context and the problem of the study under reference. Further the chapter presents a brief review of literature and method of study adopted.

The second Chapter: Portrayal of ICDS Policy and programme implementation.

The Third Chapter: Depicts the study area and the profile of ICDS and the beneficiaries under reference.

The Fourth Chapter: The extent of utilisation of ICDS services by pregnant & lactating women by process variable wise.

The Fifth Chapter: Depicts the nutritional status of children and Longitudinal impact of ICDS on children between the age of 6-72m.

The Sixth Chapter: This chapter presents the summary and findings of the study.